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Construction

BALTIMORE, MD.

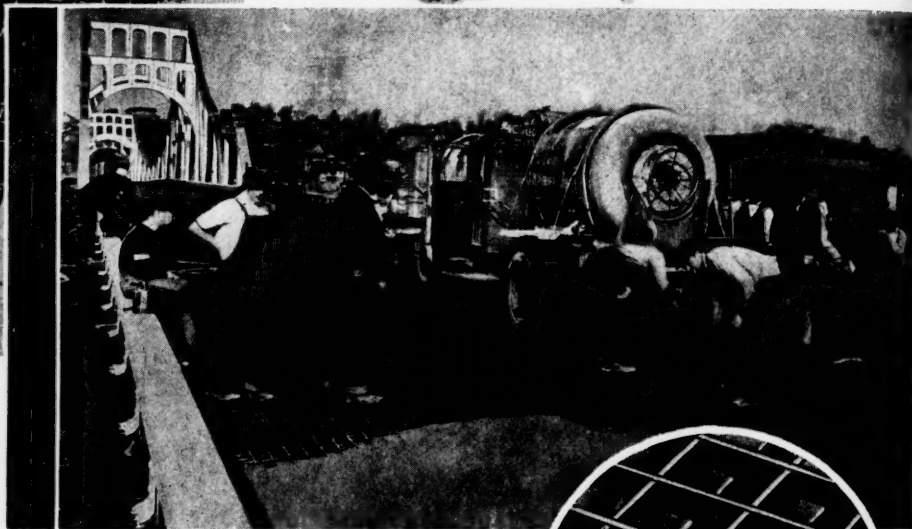
JUNE 9, 1932

Sales Volume Exceeds Production

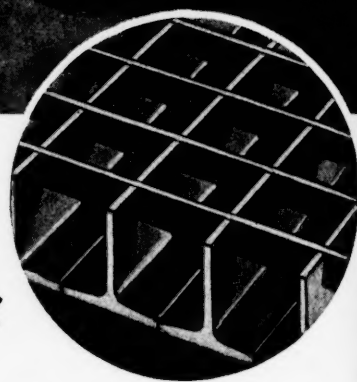
While sales for the first quarter of this year were below those of last year, this diminished volume was in excess of our production, according to Henry H. Heimann, executive manager of the National Association of Credit Men. He points out that inventories in the wholesale field are estimated to be as much as 20 per cent under a year ago and retail inventories 15 per cent lower than a year ago. The supplies of finished goods are the lowest since 1926.

We are thus building a demand that will mean the return of activity. The country cannot continue indefinitely to consume more than is being produced without increasing production. Expenditures for repairs, improvements and replacements have been held to a minimum during the past two years. This offers encouragement for the immediate future. Money will soon have to be spent to prevent further deterioration of buildings, equipment and machinery beyond the point where capital investment will be seriously endangered.

In this connection, encouragement may be taken from Southern construction awards in May. The figures are gathered from reports that have been published in the Daily Construction Bulletin and in the Manufacturers Record. They show an increase of 35 per cent over April, and while not extraordinary as compared with a period of great activity, they represent the highest monthly total so far this year. Also, contracts to be awarded show an appreciable increase and these include work not only for new structures, such as apartment houses, hotels, banks, office buildings, school buildings and a variety of others, but provide for additions and alterations to existing structures. All of this is creating work for thousands of building tradesmen and a demand for materials.



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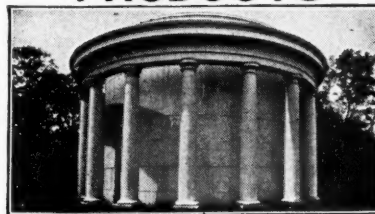
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* National Electric Light Association figures—1931.

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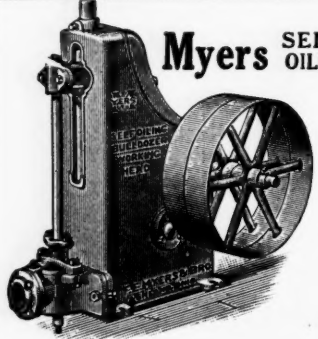
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Manufacturers Record

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Vol. CI No. 23 }
Weekly }

BALTIMORE, JUNE 9, 1932

{ Single Copies, 20 Cents.
{ \$6.50 a Year

Create Employment and Protect Investment

EMPLOYMENT records on Federal Aid highways in 1931 show that for each \$1,000,000 expended on road building, 3000 men were required in direct construction work. This estimate, based on actual expenditures and men at work, is used by T. H. Cutler, president of the American Road Builders' Association, to emphasize additional public highway building for employment creation. "In 1931," he states, "about \$1,000,000,000 was expended on state roads, and the average direct employment was 270,891 men per month." This does not take into account the additional number of men laboring on local road and street work, nor the commonly accepted figure that two men are employed in the preparation of materials, transportation and similar activities occasioned by highway work in progress, for each man laboring directly on the roads. Despite the drop in public road construction this spring, W. C. Markham, executive secretary of the American Association of State Highway Officials, declares that during the month of April contractors working on state road jobs gave whole or part time employment to 205,221 men as compared with the 185,798 employed in April, 1931.

Aside from the large amount of work for the idle that needed additional public improvements would create, construction costs are at least 50 per cent below the figure of two years ago, and materials, equipment and transportation industries would be at once greatly benefited. To cite a particular example. E. E. Duffy, of the Portland Cement Association, recently stated that to build a mile of concrete pavement, 20 feet wide, more than 4500 tons of material must be mixed and molded into a pavement strip.

Two trains of more than 50 cars each are required to move the material. The production of a concrete pavement begins in the quarries and cement mills, but not until mines and forests have supplied the raw materials for the factories fabricating equipment and supplies. Paving mixers, cranes, trucks, railroad cars, cement kilns, explosives, sacks, and other products must be provided, giving employment to skilled and unskilled labor.

Mr. Duffy further shows that, to get the raw materials for the cement used in a mile of concrete road, an average of 400 pounds of dynamite must be exploded in the quarries. After materials have been assembled, 340 tons of coal, or its equivalent in oil or gas fuel must be burned, to obtain the 650 tons of cement needed.

The production of sand and gravel, or crushed stone, also necessitates extensive use of skilled and unskilled labor. A little less than 3865 tons, or about 90 carloads of these aggregates are needed for a mile of concrete. By weight, about five and a half times as much aggregate as cement is used per mile.

Another item of importance to labor is the movement of all the materials and equipment to the scene of operations. Oftentimes transportation cost runs as high as \$6000 per mile of construction.

The placement of concrete is of such a nature on a job of that size that a large force of men is required for each paving mixer, usually upwards of 35. Subgrades must be prepared. Some 5000 feet of concrete forms must be continuously installed and removed. Water must be supplied in volume, necessitating the installation of pumping equipment, piping or tank

trucks for haulage. Water is required not only to mix the concrete, but also the freshly placed concrete must be made as level as a floor, and it must be properly cured, the latter operation often requiring the use of more than 200,000 gallons of water per mile.

Recently the Bureau of Public Roads gave the results of a survey which showed that 91 per cent of the money received by contractors to build concrete pavement quite promptly finds its way into the pockets of workmen.

It is upon such facts as these that the MANUFACTURERS RECORD has based its advocacy of the continuance of highway construction. It believes that, as employment is the vital need of the present, to undertake public work of an essential nature is of first importance.

As in private business, it is important for the government to protect its plant investment. While the need for creating work for the unemployed is vital, at the same time the government has an enormous investment in public works, including road building, that must be properly maintained and essential construction continued to complete the program that assures full return to the public. It is wanton waste to neglect highway maintenance and jeopardize the investment that has been made in good roads. There are thousands of miles of roads that need resurfacing as a protection from disintegration, and other thousands of miles of low type and unimproved roads that need to be surfaced or have a better grade of surfacing to withstand increased traffic. As Frederick E. Everett, president of the American Association of State Highway Officials, said recently:

"If the roads are permitted to remain in their present condition, the traveling public will be penalized in high car-operating costs and the states through high-cost upkeep costs.

"Of the 197,000 miles of the Federal Aid system, only 76,300 miles have high type surfaces. Some 14,500 miles on the system have received no attention whatsoever, and 28,850 miles are still in the graded and drainage state. An additional 57,800 miles have only low type surfaces and 19,400 miles have intermediate type surfaces."

It should be remembered that with about 3,000,000 miles of roads in the United States, with only 314,000 miles on state highway systems, and with only about 11,000 miles of Federal Aid highways improved in 1931, there is much to be done. The importance of highway maintenance and construction goes beyond the need to create jobs for the unemployed. There is a "withholding that tends to poverty" and true economy includes putting an end to waste as well as careful planning for productive expenditure. Proper highway development or other public construction to take advantage of extremely low costs on materials and equipment in these times is true economy.

The bulk of the construction work now under way throughout the country is being done by the government and its various branches. Limited in amount as it is, this public work is saving the construction industry and engineering and building trades from utter stagnation. It is essential to develop quickly a greater building program, not only to create employment but because prevailing prices make it possible to get the work done at the lowest cost in years.

Platform for American Industry

FOR the fourth consecutive time in the history of national political campaigns, the Platform of American industry, drawn by representative manufacturers under auspices of the National Association of Manufacturers, is to be presented to both the Republican and Democratic conventions, to be held this month. John C. Gall, secretary of the association, explains that the platform is industry's attitude on outstanding industrial problems of the day. Some 200 prominent industrialists of the country comprised the committee.

As stabilization of employment is closely dependent on stabilization of industry, the platform emphasizes the necessity of permitting industry a reasonable measure of self-regulation by modification of the anti-trust laws and of encouraging plans to stabilize employment by the establishment of voluntary employment reserves. Compulsory laws to this end and public doles are opposed. The intended purpose of the anti-trust laws to prohibit monopoly and unfair trade practices is endorsed but Congress is urged, without sacrificing the basic purpose of the Sherman Act, to enact such legislation as to permit voluntary agreements between sellers that will avoid destructive competition and the constant incentive to capital concentration; but help stabilize payrolls, preserve earnings, and restore equality of privilege between buyer and seller.

Prompt and drastic reduction of public expenditures of national and local governments is urged. Abolish duplicate or unnecessary activities and personnel. Consolidate agencies performing the same major functions and locate administrative responsibilities in individual officers. Minimize and unify multiplying government demands for information and stop distribution of unnecessary departmental publications. Repeal abnormal taxation made necessary by the present emergency as rapidly as possible.

Resubmit the question of control of alcoholic beverages for consideration of the electorate through constitutional conventions assembled in the separate states.

Primary protection of American producers and wage earners is necessary and in the regulation of foreign commerce due regard should be had for the effect of depreciated currency on the importation of all commodities. Maintenance of an independent non-partisan tariff commission to adjust tariff rates and let them be made effective by executive proclamation which is the alternative to frequent general legislative revision with all its disturbing consequences.

The promotion of agriculture, commerce and industry requires co-ordination of transportation by rail, highway, air and water. Each should be subjected to appropriate regulation. All common carriers should be able to compete under conditions of equality. The Recapture clause of the Transportation Act should be retroactively repealed.

The development and movement of our coastal, inter-coastal and foreign commerce demands an adequate and modern fleet of American built, individ-

nally owned and operated ships maintaining regular routes and sailings.

Adopted in 1898, the bankruptcy law is not suited to present conditions. It should be thoroughly revised by Congress in line with the principles outlined in the report of the Solicitor General, following the recent investigation by the Department of Justice.

Abandonment of our hopeless experiment in the government control of agricultural prices, production and surplus, is urged. It has injured those it was intended to benefit, contributed to the demoralization of our markets and proved a futile contest with natural law.

Adoption of a sound and permanent policy with respect to the collection of international debts and the interest upon them is urged. Approval is given to the moratorium now in effect which should be continued until the debtor nations recover from the present world depression.

Asserting that our government was neither conceived nor fashioned to engage in competitive enterprise with its citizens, nor to administer the tasks of production and distribution, Federal regulation and activity are justified only to the extent necessary and practical to perform its exclusive function or supplement local regulation within its acknowledged area. Federal regulation of state functions is condemned as contrary to our constitutional system.

Opposition is voiced against every effort through withdrawal or denial of jurisdiction to prevent our national courts from exercising all their constitutional powers to administer a uniform system of justice.

The primary function of government is the preservation of order, and the efficient protection of life and property. Make the personal security of the citizen in his home, his occupation and in the product of his labor, the first business of national and local government.

Southern Products

THERE are more than 46,000 factory establishments in the South which, based on the latest census figures available, produced in 1929 goods valued at \$11,724,000,000. Through expansion of manufacturing, aided by an adequate power development in recent years, the output of finished products from the Southern States has been increasing materially. Development of food-processing industries was especially pronounced in 1931, and in this field of endeavor, because of the South's abundant agricultural resources, this section is destined to make marked progress in the next few years.

The South is a supplier of other sections, and it is to be noted that a large proportion of the country's requirements of timber and lumber products, including kraft paper and naval stores; cotton and its products; iron and steel; ceramics; chemicals; minerals of every description; fuels, and food crops come from the South. The section has long been the chief source

of supply of many of the country's primary products.

The automotive industry of the country draws heavily upon every Southern state for a variety of materials and manufactured products entering into manufacture and operation of motor vehicles, as was shown recently in these columns.

The diversity of the South's products and the extent of the South's ability to serve the great industries of the nation is further illustrated in the purchases of another and entirely different industry: Swift & Company, in operating its great food packing and fertilizer plants, spends over \$72,000,000 each year in the South. The Charleston News and Courier, commenting on a pictorial map issued by the Swift organization, illustrating the source of its principal supplies from the lower South and Southwest, calls the attention of South Carolina to the fact that only cottonseed and cottonseed oil are purchased in volume from the state's producers. The chief expenditures of Swift & Company in the other Southern states listed are for the following:

Tennessee—cottonseed, cottonseed oil, cattle, hogs, dairy products, poultry, eggs, coal, lumber, wood for smoking, boxes, barrel shooks, fertilizer and materials.

North Carolina—cottonseed oil, peanut oil and lumber.

Georgia—cottonseed, cottonseed oil, peanut oil, cattle, hogs, poultry, eggs, turpentine, rosin, fertilizer and materials.

Florida—cottonseed, cottonseed oil, lumber, turpentine, rosin, fertilizer and materials.

Alabama—cottonseed, cottonseed oil, peanut oil, cattle, hogs, dairy products, poultry, eggs, coal, steel, barrel shooks, fertilizer and materials.

Mississippi—cottonseed, cottonseed oil, dairy products, poultry, eggs, lumber, wood for smoking, barrel shooks and boxes.

Louisiana—cottonseed, cottonseed oil, sugar, salt, lumber, turpentine, rosin, wood for smoking, boxes and barrel shooks.

Arkansas—cottonseed, cottonseed oil, lumber, wood for smoking and boxes.

Oklahoma—cottonseed, cottonseed oil, cattle, hogs, dairy products, poultry, eggs, crude oil, coal, lumber and wood for smoking.

Texas—cottonseed, cottonseed oil, cattle, hogs, dairy products, poultry, eggs, lumber, wood for smoking, boxes, barrel shooks, crude oil, natural gas, sulphur, fertilizer and materials.

It is to be noted that most of the commodities purchased are semi-manufactures, which enter into other manufactured goods sold throughout the country and the world.

REPORTS from representative merchants scattered throughout the country indicate there has been another successful observance of National Cotton Week, according to George A. Sloan, president of the Cotton Textile Institute. Plans for continuing aggressive promotions throughout June and in many cases up to the end of July are in effect. Even in the face of declining prices, the dollar sales volume of cotton goods by many stores showed little shrinkage. Close to 25,000 establishments participated in the campaign. Included were 26 chain organizations with 15,324 retail outlets participating.

Southern Construction Awards

Show Increase

CONTRACTS awarded in May for construction, engineering and building projects in the sixteen Southern States had a total valuation exceeding \$35,000,000, the highest monthly total this year, according to a compilation of reports published in the DAILY CONSTRUCTION BULLETIN and in the construction columns of the MANUFACTURERS RECORD. The May figure represents an increase of 35 per cent over the total for April, and compares with awards in the same month last year of \$69,047,000, an encouraging showing when it is considered that the valuation of construction awards each month this year, for the country in general, has been at a rate of about one-third the total for the corresponding month of last year.

The total valuation of awards in the South for the first five months this year exceeds \$124,000,000. It is conservatively estimated that by including numerous small projects for which contracts have been let, but which are not reported due to space limitations, the total would be brought to well over \$165,000,000.

Road, paving and bridge construction activity continued to gain as contrasted with preceding months, the valuation of awards aggregating over \$14,260,000, compared with awards for similar projects in April totaling \$12,833,000. That this class of construction will continue to figure prominently in the South's expansion program is indicated by the valuation of proposed work of this character announced last month, amounting to more than \$16,250,000. Last month road and bridge work let to contract in a single day in several Southern states represented expenditures exceeding \$3,000,000. If the bond market improves, several states that have delayed the sale of securities will advertise for bids. Meanwhile, surveys have been made, estimates prepared and preliminaries worked out so that work may proceed with the least possible delay. With indications that the Federal Government may provide funds for public works of this character, the projected \$15,000,000 bridge across the Mississippi River at New Orleans and the \$10,000,000 bridge across the Chesapeake Bay, connecting

the eastern and western shores of Maryland, are being discussed anew. In addition to the work being carried forward by state organizations, the county, district and parish officials are building in the aggregate considerable mileages of secondary roads, necessitating the acquisition of new machinery and equipment and the purchase of materials and supplies in wide variety. Gasoline tax revenue this year in several Southern states has shown a sharp increase as compared with last year.

City, county, government and state building projects let to contract last month involved an expenditure of more than \$10,482,000. This total represents the cost of new post offices, courthouses, fire stations and federal buildings for the capital cities.

Miscellaneous engineering, construction and industrial projects for which contracts were let in May amount to \$6,220,000. Included in this total are all classes of work not included in the other classifications listed in the table herewith.

Sewers, drainage and waterworks projects loom large in the South's 1932 construction program. The May total for these related classes of construction was \$1,548,000, compared with the April total for similar work of \$1,347,000.

Apartment houses and hotels, association and fraternal structures, bank and office buildings, church edifices, store and school buildings go to make up the

South's building program. In addition to the sums represented by the new structures, expenditures are being arranged for additions, alterations and modernization work. Encouragement may be taken in this depression period from the increase in the value of contracts awarded and from the work being provided for thousands of building tradesmen and the demand created for materials.

Asks \$800,000 for Nurses' Home

New Orleans, La.—Upon the recommendation of the House Committee, Dr. C. G. Cole, chairman, the board of administrators of New Orleans Charity Hospital will request the State Legislature now in session for an appropriation of \$750,000 to \$800,000 to erect a new nurses' home at the hospital. A special appropriation of more than \$85,000 will also be asked for emergency repairs.

Two Government Heating Plants

Washington, D. C.—Bids will be opened June 23 in the office of Jas. A. Wetmore, Acting Supervising Architect, Treasury Department, for construction of a complete distribution system from the Central Heating Plant to various public buildings. Construction will cover concrete tunnels, conduits and other structures, in addition to piping and associated equipment to be installed. Contract for plant equipment proper was awarded recently to the Combustion Engineering Company, New York. United Engineers & Constructors, Inc., Philadelphia, are consulting engineers on the project.

On June 21, the Public Buildings and Public Parks Commission of the National Capital, D. H. Gillette, Chief, Engineering Division, opens bids for West Central Heating Plant in Potomac Park, near the Pan American Building. Construction will embrace a building 145 by 60 feet, for installation of five 1000-horsepower boilers. Cost of the project will be about \$750,000.

MAY, 1932

	Contracts Awarded	Contracts to be Awarded
Apartment houses and hotels	\$295,000	\$453,000
Association and fraternal	72,000	70,000
Bank and office buildings	137,000	300,000
Church buildings	191,000	455,000
City, county, government and state projects	10,482,000	4,078,000
Dwellings, costing \$10,000 and over	735,000	1,031,000
Miscellaneous	6,220,000	14,139,000
Roads, paving and bridges	14,260,000	16,254,000
School buildings	739,000	1,997,000
Sewers, drainage and water works	1,548,000	6,790,000
Store buildings	429,000	233,000
Total	\$35,108,000	\$45,800,000

Government *and* Business

in the Present Hour

By JOSIAH W. BAILEY, Senator of the United States from North Carolina



Josiah W. Bailey

THE immediate problem in the United States is the circulation of money.

There was a maze in the Senate when the facts were disclosed by Senator Glass showing that

there was, and for several years had been, eligible paper in the banks sufficient to justify issues of Federal Reserve notes in volume more than equal to every legitimate demand. Why, inquired Senators, have these notes not been issued? And, a satisfying answer not forthcoming, there was at once an attack upon banks holding these notes. The attack was in its way satisfying—that is, it satisfied those who made it—but it did not add a dollar to the circulation. It is more than likely that it had the opposite effect, since it tended further to shake confidence in the banking structure.

In addition to the eligible paper available, we now have the Reconstruction Finance Corporation, one object of which is to free banks of non-liquid assets and substitute money therefor, thus adding to available circulating money; and we have also the Glass-Steagall measure which provides for issuing Federal Reserve notes, under certain conditions, upon the base of obligations of the United States. Altogether it may be said that we have a broad and ample source of circulation sufficient to meet every sound demand; and it may be added that the amount of "money in circulation" as of March 31, 1932, exceeds the amount in circulation March 31, 1931, by the sum of a billion dollars. And the Federal Reserve system is now pouring money out for circulation (not into circulation) at the rate of 75 million to 100 million dollars per week.

Nevertheless we all know that money

is not circulating in volume or velocity by any means sufficient to meet actual demands. If we may conceive of the circulation of money as a stream, we recognize that the stream is stagnant; if we may conceive of it as a current in analogy to the air, we all know that we labor under a sense of suffocation; if we conceive of it as credit for ordinary demands, we know there is none.

The simple truth is that, while the Government and the Federal Reserve system may provide an abundant volume of money for circulation or credit, it requires somewhat more to make it circulate, either as cash or credit. It is at this point that advocates of additional money, whether of paper, silver, Federal Reserve notes or gold, have failed to think through. It is here that politicians who would prove themselves skilful surgeons to perform a major operation convince the thoughtful that they are no more than Indian medicine men, and in some instances plain quacks, very good political doctors practicing a profession of which they know nothing, to wit, economics.

What is this somewhat more that is required to put money in circulation, make for credit, accelerate the circulation, and keep up the circulation? There can be no doubt of the answer, no difficulty in finding the answer.

The vital source of and cause of the circulation of money is the employment of capital in profitable business or enterprise, including agriculture. The banks would lend the money if there were profitable business or industry to borrow it. The number of employed is in direct ratio to the amount of capital invested in profitable business. Therefore, since our present difficulty is in the failure of available money to circulate, and the most terrifying aspect of it is unemployment, we do well to look to business to see what is being done to encourage and promote profitable enterprise. Who doubts that, with the quickening of business throughout the country, the circulation of money and relaxa-

tion of credit would proceed, the army of the unemployed would be reduced to comparatively negligible proportions, commodity prices would rise, and the longed-for recovery would be under way?

We undertake to increase and quicken circulation in order to restore business. Should we not rather, since the sources of circulation are manifestly abundant and available, proceed to quicken business in order to increase and quicken circulation? And what is the function of government in this matter? In using the word "business" I use it as including farming, for farming is business.

What is the attitude of the Governments, local, State and Federal, toward business?

What is the effect upon business of an annual tax charge in the United States of fourteen billions of dollars—four billions Federal, eight billions local, two billions State. Here is a burden that warns every one who has capital to invest that, if he shall invest it in business, the tax-gatherer and the trustee in bankruptcy will soon demand it of him. Here is a burden that warns the farmer not to own a farm, and suggests that, if he produce, he shall produce only for himself, that warns the thrifty not to own a home, the prudent not to build a house or expand an industry, but to hide such capital as he may have; neither to invest it nor to lend it to another; but either to hoard it or to put it into the form of a tax-free public bond, in which form it employs no one and taxes all. If you are seeking to find what is the matter with business, consider this tax burden. And, if you are interested in getting money into circulation, or relieving unemployment, demand a general reduction in expenses of government.

There may be argument that the activity of governments aids the circulation of money. This is a delusion. Government is not an industry, not a business, not a profit-making enterprise. It is a necessity. It is, rightly employed, an aid to business in preserving liberty,

in ensuring justice, in the enforcement of contracts, in providing the common defense. But, while these employ money and in a way circulate it, every dollar taken by the tax-gatherer is a toll upon labor, whether that labor be the labor of the mechanic, clerk, farmer, day-to-day worker, the business man or the manufacturer, and also a toll upon credit. Government and its taxes are not a profitable business, but a charge upon business, and, so far from aiding the circulation of money, tend to divert money from those enterprises which circulate it.

These considerations postulate one instant policy, to wit, since the United States Government is under imperative necessity of finding new taxes to produce an additional billion dollars of revenue, it is the duty of the Congress to ascertain the sources of this revenue that will tend to bear less heavily than others upon business. In any event the new revenue adds to the difficulty of arresting our downward progress. How shall we so contrive as to do the least harm? That is a question which I would like to discuss, were there opportunity. But I cannot discuss it here. It is remarkable that our tax problem has been discussed so little in these terms. The discussion has been political, whereas it ought to have been economic.

It is not to be denied that the funds or credit of a government may be employed temporarily to stimulate business and, therefore, to accelerate circulation. The building of a road or a structure accelerates business for a time; but all will depend very shortly on whether the road or the structure is a money-maker and an aid to profitable enterprise. No road is worth the money, unless it aids commerce, agriculture and industry, to the extent of the interest on the cost, plus the upkeep and an annual saving that will discharge the cost before the road is worn out or becomes obsolete. Public servants who build roads or structures to gratify political demands or social ideals, have not served their public well.

It now appears that the Congress will be called upon in the present emergency to appropriate vast sums for public construction, the object being two-fold, i. e., (1) to stimulate business and, therefore, the circulation of money, (2) to relieve the menacing pressure of unemployment. This is to be recognized as the last throw of the dice in the gamble with fate. It is confessedly a recourse of desperation, and may, as such, be justified. If it succeeds, well enough; if it fails, our situation will be incomparably worse. We will, I fear, have stumbled into the hole in the bottom of the pit of this depression and slipped through to the abyss. Nor should we forget, as we consider any important measure of relief or

recovery, that in such a situation as we now are in, there is the possibility of that hole, and the abyss.

We may hope, by a cautious, well-conceived program, to give to commerce and industry a stimulation that will temporarily induce the relaxation of credit, the acceleration of circulation, the improvement of business to tide matters over until the crops shall have come in, and then with better prices to establish ourselves upon a more secure footing. This is the motive of those who propose the immense bond issue, to loan funds for construction to towns, cities, States, and, perhaps, others; and it must be admitted that at any rate the argument of supreme emergency is compelling. There is overpowering argument in that dark, deepening cloud of unemployment. But let us be mindful to whom we loan, for what purpose, and also how much. And, if we must yield, let us also be mindful of the precedent and all that it predicates in the use of the taxing power, the government credit, and even the exhaustion thereof, for purposes never contemplated in the century and a half of this Government's existence. And let us not expend one dollar upon other than profitable enterprise.

In passing from this subject I have two remarks to make: (1) A government that does not encourage the investment of private capital in profitable business must in due course find itself compelled to invest its borrowed capital in doubtful enterprise; and (2) a government that taxes its people excessively will sooner or later find it necessary to use its credit in an effort to do what profitable business would automatically have done. These two remarks carry two great lessons of the present situation.

Business and the profitableness of capital invested is directly affected by the government in many other ways than taxation. This discussion would not satisfy me, if it did not make some mention of them.

The control of credit by the Federal Reserve System, operating under the eye of the Government, is directly related to business. It is not improbable that the present depression may be traced, in no small measure, to the failure to control credit in 1927, 1928 and 1929, in which years speculative activities drew money in immense volume from the civilized world to New York City, the obviation of credit on the Stock Exchange in one year (1929) amounting to over one hundred billions of dollars, the cash required being twenty-two billions. This must never happen again. The use of money or credit in speculation is a diversion of these essentials of commerce, agriculture, industry and employment from their channels; for speculation, no matter how profitable, is not profitable enterprise in the economic sense. And when unprofit-

able its paralyzing power is immeasurable, as the reader may bear witness.

I must also mention the effect of an unbalanced government budget. Such a fiscal condition impairs government securities, undermines confidence, makes business impossible, because business men cannot carry on unless they are informed as to the amount of taxes imposed upon them, and paralyzes both credit and circulation. It makes for hoarding, and also threatens to drive capital not only out of investment, but out of the country. The fiddling in Washington on this subject, the log-rolling and the delays, could not have occurred if the authorities had realized the truth of this statement. It would have been better to have balanced the budget when the deficit first occurred, with taxes both unwise and unjust than to have postponed the task. The unbalanced and neglected budget as of June 30, 1931, served to increase the deficit as of the present moment and thereby added to the present difficulties. The failure of Congress these five months to meet the situation has served not only to render the public less able to pay taxes, but has added, and is today adding, immeasurably to the task of the Congress. A little more delay and it will hardly be worth while to levy any taxes, for it is axiomatic that no government can balance its budget if its people cannot first balance theirs.

The Government bears a direct relation to business at the present moment in the matter of the depreciation of money of other nations in exchange with ours. By reason of the alteration in the value of foreign currencies as compared with our dollar, foreign manufacturers are placed in position to undersell us in the world markets and even in our own. Our tariff barriers are high, but low money throughout the world—and, therefore, low cost of production—in many instances more than accounts for these barriers. Adjustment one way or the other is not unlikely to prove an immediate necessity. Whether it will take the form of compensatory American tariffs or lower American money, or both, remains to be seen. It is referred to here only to show the direct relation of legislative action to business.

Since the theory of representative capacity has developed to the point where many members consider it to be their duty not to think for themselves, but to try to find out what their constituents desire, the time has come when it may be said that there will be sound thinking or action by members of the Congress whenever there shall be sound thinking and action by their constituents. Perhaps this depression may induce such as the readers of this journal to do some sound thinking and acting. If so, it will duly be reflected in the Congress.

Big Timber Cruising Job

By

ELLERY FOSTER

U. S. Timber Survey

HAVING as its object the determination of the volume, area, quality, species, rate of growth and rate of depletion of the forests of the South, the United States Forest Service, as authorized by the McSweeney-McNary Forest Research Act of 1928, has started what is probably the largest timber cruising job ever undertaken. From Norfolk, Va., to Brownsville, Texas, and from coast to mountains the whole South is to be gridironed by timber cruisers and the Nation's greatest forest region inventoried and reduced to facts and figures.

After months of preliminary work in which several systems of cruising were tested for their applicability to so large a job, a method has been selected and perfected that will do the task with a maximum of accuracy and a minimum of cost. This is known as the line plot system and is modeled after the recently completed Forest Survey of Finland. Compass lines are run at given intervals across the territory to be cruised. Detailed measurements of old and young growth and records of forest conditions are made on $\frac{1}{4}$ -acre sample areas at $\frac{1}{2}$ -mile intervals along these lines. These sample plots, when taken in sufficient number, will average out with uncanny accuracy to give a correct picture of

conditions prevailing on the area traversed.

The area to be cruised as a unit, and the variety of conditions to be encountered on the unit, determine the interval at which the lines should be run. For the Southern States generally, it has been found that lines run at 10-mile intervals will give accurate results for units of 3,000,000 acres or more.

In order to speed up the work and to get the results of the survey published and in the hands of interested agencies at the earliest moment, the Federal cruisers are receiving aid from local sources, including the states and private agencies such as chambers of commerce,

trade associations, the railroads and others.

When the cruise is finished for a given unit, accurate information in the form of a detailed report will be released, giving the present volume of merchantable timber, its size and quality, the amount of young timber which will come to maturity in a given period, the percentage and area of forest land by forest types, the area of young growth and cultivated land and cut over land not restocking to young growth, and the area in need of planting. In the great longleaf and slash pine forests of the Coastal Plain, the number of crops of turpentine timber in operation, the height of the faces, the kind of cups used and the probable number of crops that will be available for cupping at certain periods in the future will be given.

This information will be of value to lumber, pulp and naval stores companies, railroads, tax assessors, economists, chambers of commerce, prospective investors, financiers and legislators. For use in planning for future business, advertising a given region, in appraising land values, evaluating bond issues and fixing public policy as regards natural resources, such data as the cruisers will take and report will fill an important demand.

Paper and pulp companies, with a designing eye upon the forests of the South, will be able to use the data from the survey in deciding on the most desirable areas in which to locate plants



U. S. Cruisers Work in the Virgin Hardwoods of the Mississippi Delta



As They Gridiron the South, the Cruisers Find Some Very Good Longleaf Pine

for paper production. Timber preserving companies looking for sources of supply or the location of new plants will find the information of value. The great naval stores industry of the coastal region is looking to the survey as the basis for its plans for future expansion. The railroads of the South also are much interested in the survey, since with its data they may more effectively plan for transportation of timber tonnage, one of the biggest items of their freight business. The best use of land is one of the pressing problems facing the South; until a thorough knowledge of the forest situation is had, legislators and other public officers whose duty it is to study and, if possible, solve the problem must be badly handicapped.

The Federal cruisers are now at work in northwestern Mississippi where a total of 3,000,000 acres has been gridironed to date. The state, through its Research Commission, is planning to cooperate with the Government in order that the data may become available as soon as possible. Other states and regions within states will be cruised as funds are appropriated or otherwise provided.

There is an immediate demand for the survey in several of the Southern States where the utilization and development of timber resources must play an important part in the coming cycle of more prosperous conditions.

Why Cotton Exports Increased

Quite naturally, cotton exports from the United States have increased in the recent past, writes Walter Parker from New Orleans. He says:

"United States grown cotton is now the cheapest cotton in the world. It is below a parity with foreign grown cotton of similar grades."

Mr. Parker calls attention to the fact that greater use of foreign cotton and decreased purchases of American cotton by foreign buyers, when the Federal Farm Board was lending excessive amounts in an effort to maintain the price artificially, resulted in the piling up of a huge surplus of American cotton. Further:

"The world was consuming 15,256,000 bales of American and 10,626,000 bales of foreign cotton in the year just preceding the Farm Board. After two years of the Farm Board's attempts to set aside natural law, the world was consuming only 11,045,000 bales of American cotton as against 11,438,000 bales of foreign cotton."

"The price depressing effect of the large stocks held by the Board simply resulted in declines in the value of American cotton to below world parity,

and so, when American cotton became the lowest priced cotton in the world, the world again began to buy in quantities.

"As I interpret the situation, increased exports of American cotton result from relative cheapness as compared to other growths, and, in so far as I can see, intensive economic studies and investigation of the needs of foreign consumers have had nothing to do with the matter.

"The merchant-distributor trade is and long has been fully informed as to the needs of foreign consumers, and has not been neglecting any opportunities to make sales. These merchant-distributors handle and find markets for 85 per cent of each cotton crop grown in the United States."

Hardwood Mill Resumes Work

Bastian, Va.—Directors of the Virginia Hardwood Lumber Company recently authorized the resumption of operations of one side of its double band mill here for the remainder of the year. In addition to employees now living in company houses, of which there are about 50, the company will employ approximately 75 additional men as drivers, road men and timber cutters. Operation of the mill beyond the time announced will depend upon the condition of the lumber market at the end of the year, but it is understood that the mill management will make every effort to continue at least partial operation.

Meharry Medical College Buildings, Nashville, Tenn.



Erected at a cost of approximately \$2,000,000 and designed for training negro physicians; probably the largest institution of its kind, with a main building 280 by 340 feet, 5 stories, of reinforced concrete construction, with concrete foundations, mastic tile and concrete floors, and built-up and asphalt roof; project also comprises 3-story nurses' home, power plant, hospital and other facilities; Gordon and Kaelber, Rochester, N. Y., architects; Hart, Freeland & Roberts, Nashville, associate architects; Angle-Blackford Company, Greensboro, N. C., general contractors, and Charles Nelson, Nashville, chairman of building committee.

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Depreciated And the Tariff Foreign Currencies

THE subject of depreciated currency is one that the national association has taken into account. It affects every manufacturer in the United States. If the tariff bill which became effective in 1930 was then drawn in accord with the facts as they existed at that time, then that tariff is inadequate to protect us today. We recognize the world-wide chaotic conditions. Different conditions prevail in different countries and those conditions affect industry in the United States.

It seems to me, however, that in consideration of this subject, we come down to just one factor, the sale of labor in the form of commodities, because that is precisely what happens. If you trace the labor in an article from the land through to the finished product, you find that labor represents in many cases over 90 per cent. Are we in the United States to adjust our labor to the basis of foreign competition?

The tariff bill has been a depreciated resistance to foreign competition. Due to the fact that certain countries have gone off the gold basis, goods can be sent in here now that were produced at prices that cannot be duplicated by the American manufacturer. If we strive simply to protect industry so far as difference of cost is concerned, then we find ourselves in a position where the cost of goods produced abroad bears a direct relationship to cost of goods produced here.

The National Association of Manufacturers is concerned with no specific schedule. It is concerned, however, deeply, with the principle that adequate protection is necessary to American industry and American agriculture and American labor.

I have had letters from all over the United States, from labor leaders, from men in plants, urging upon us the submission to this committee and to Congress the fact that our tariff is wholly inadequate today to resist this incoming foreign competition. I call attention to the fact that no matter what the situa-

Excerpts from testimony of H. L. Derby, chairman of the Tariff Committee, National Association of Manufacturers, before the Committee on Ways and Means, House of Representatives, on "Equalization of Tariff Duties by Compensating for Depreciation of Foreign Currencies."

tion may be, since some countries have gone off the gold standard, you have not begun to feel the effect that will be felt when they have readjusted themselves and are able to take full advantage of the difference in the value of currency.

I believe in free competition. But I do not believe in competition which stacks the cards against me and which gives the other man the market by reason of the fact that I cannot meet that competition.

Our labor rates have been reduced, you will say, in this country. Yes, they have; and they will be further reduced. Plants have been reduced in operations and they will be further reduced in operations unless we meet this situation.

I think the tariff schedule should be increased 25 per cent to meet this condition. I think that if the Tariff Commission could make an analysis—and they could do no better work than to make an analysis of the whole schedule—you would be amazed at the number of articles that would disappear from the free list and come on the dutiable list.

I maintain, so far as this situation is concerned, we are going to find ourselves in the position, in a very few months—and it will make no difference whether we try to create prosperity by legislation, by excessive taxation, or what we do—that this country will go forward industrially and agriculturally only in so

far as we are able to meet this foreign competition.

They say we have had retaliation with reference to the tariff; that is, the tariff was too high and these countries have retaliated. You men know that England, a free-trade country, collected \$562,000,000 a year for the last ten years in duties and tariffs. Our collections were only \$570,000,000. England has not retaliated. England has done the sensible thing of protecting her industries against any other competition.

Our laborers come and say, "Will you give us employment? We do not want the dole. We do not want charity. We want employment." When a plant has to operate on a basis of 20 per cent or 15 per cent, by reason of the fact that the goods which represent that labor are produced abroad and brought here, there is only one answer to labor and that is "We are sorry."

We cut prices. We cut our costs. All you have to do is read the financial papers to see what industry has done to try to meet this situation. They have run into losses, operated at losses in order to give labor employment.

We feel that tariff protection is necessary to American industry and there is not anything that could be done which would be such a great discouragement to industry and to agriculture and to labor as not to meet this tariff situation, not to protect American industry.

The whole structure of our national resources has been built on a protective tariff. When we depart from that, especially in times like these, when the whole world is in chaos, when other countries are protecting their labor—and they do it through systems which are so immediate and so effective, that there is no answer to them—then our tariff system does not have the effect of an embargo. But there are dozens of foreign countries that place embargoes on our goods and it is going to make no difference what our tariff schedule is, those countries are going to continue to do that very thing.

Steel

Shipping Containers

Norfolk, Va., June 4.

The first unit of the new plant of the Shipping Container Corporation at Cape Charles, Va., to have a daily capacity of 3000 steel containers, is being rapidly completed. The factory building, 50 by 200 feet, is located in one corner of a 45-acre tract and allows for future expansion as well as the immediate addition of the second unit, to be known as the finishing room. The latter will be 50 by 100 feet.

Built of reinforced concrete, brick and steel, with an arched roof, the factory building represents the latest developments in approved plant building construction. W. L. Humes, Salisbury, Md., is the architect, and Charles F. Russell, a vice-president of the company and a member of the board of directors, is the engineer and builder. Materials used were supplied as follows:

Steel—Dietrich Bros., Baltimore, Md.

Brick—Douthat-Riddle Co., Inc., Danville, Va.

Steel Windows—Dietrich Bros., Baltimore

Roofing—Wood Richardson, Salisbury, Md.

Cement—Keystone Cement Co., Bath, Pa.

Machinery to be installed in the plant comprises a number of very heavy metal presses and metal stamping and cutting machines, all electrically driven. A part of the machinery was built by the Cleveland Punch & Shear Works, Cleveland, Ohio; part by the Kramme Machine & Tool Co., Cleveland, and the remainder by the Budd Manufacturing Co., Philadelphia.

The Shipping Container Corporation will be essentially a metal stamping enterprise, buying materials for its prod-

ucts in sheet form, and handling its own forming operation. Plans are rapidly being developed for the establishment of five branch plants, located at strategic points for quick distribution to all parts of the United States. These plants will be patterned after the first factory at Cape Charles, in layout, design and construction. The first branch will probably be erected in Chicago, in the near future. The other proposed plants are to be erected in Birmingham, Ala., Jacksonville, Fla., St. Louis, Mo., and one at some point on the West Coast.

Bell's steel collapsible shipping containers, of all kinds and sizes, will be produced. These containers are described by the manufacturers as being neat, light and strong, providing adequate protection against damage by rats and mice, as well as from fire and water hazards. It is claimed that they are sanitary, occupy little storage space and can be insured at a low rate. The assembly can be made by an inexperienced person, it is said. The barrel is composed of two sides, two tops and two steel rods which are interchangeable. A wire connecting the tops and bottoms will hold, by being twisted, or the barrel can be lead sealed to provide a "locked" container. The barrels are finished in attractive colors. Because of the durability of the container it can be used again and again without impairing its usefulness, say the producers; but to arrange for adequate servicing it is proposed to establish reconditioning plants in important centers, for the purpose of cleaning and refinishing used containers. These plants will also carry parts and

wire fasteners used in locking the closed package.

R. J. Bell, president of the Shipping Container Corporation, a graduate engineer, has worked for 13 years perfecting the product and developing the method of production. He is an enthusiastic believer in the value of the container for manufacturers of a diversity of commodities. Already new possibilities for the product are being developed, and a big volume of unfilled orders will keep the present plant busy for many months to come. Mr. Bell is being assisted in his work by C. F. Russell, and R. T. Rooks.

The Board of Directors consists of H. C. Watson, C. F. Russell, W. A. Dickinson, A. P. Trader, T. H. Nottingham, A. P. Hanby, G. D. Horner, R. T. Rooks and R. J. Bell. Officers are: R. J. Bell, president; C. F. Russell, vice-president; R. T. Rooks, vice-president; A. P. Trader, secretary, and W. A. Dickinson, treasurer.

Cannery Needed for South Carolina Iodine Content Vegetables

South Carolina vegetables, with their high iodine content, should have a much wider sale, not only in the Southeast but throughout the country, and especially in those areas which are afflicted with goiter. R. E. Johnson, secretary of the Chamber of Commerce, Gaffney, S. C., in efforts to secure a cannery for Cherokee County, has received assurances from a sufficient number of Cherokee farmers and landowners to insure the planting of 127 acres in vegetables and truck crops. Other acreage also has been promised. Mr. Johnson needs a guarantee of 600 acres in order to meet the requirements of a large canning company, who have advised him they then would establish a plant. He writes:

"I talked recently with buyers of produce for about 2000 stores in the Carolinas and Georgia. They buy about 50 carloads of produce daily, and can get South Carolina vegetables and canned goods for three months out of the year, and all three buyers said they would give a premium for our high iodine and iron vegetables if they could get them twelve months out of the year."

It looks like the farmers of Cherokee County should bestir themselves.

May Move Plant South

Baton Rouge, La.—Reports from Milwaukee, Wis., state that a unit of the Holeproof Hosiery Company of that city, making men's seamless hose, will be moved to the South—probably Louisiana. The unit represents about 25 per cent of the company's activities at Milwaukee, according to M. A. Freschl, vice-president.



Shipping Container Factory Building, At Cape Charles, Va., 50 Feet Wide and 200 Feet Long

LETTERS FROM OUR READERS

A Reasonable Bidding Basis Essential

P. & F. Corbin

The American Hardware Corporation
Successor

New Britain, Conn.

Editor Manufacturers Record:

We are heartily in accord with your efforts to establish a reasonable bidding basis in the construction industry. It is not too much to say that the vicious practice of shopping with the prices of sub-contractors represents the most destructive and uneconomic practice existing in that industry today. It has destroyed all semblance of good faith between the sub-contractor and the general contractor, whose interests, after all, are mutual and who therefore should properly respect each other's ethical rights. We hope that your editorial effort may bear fruit.

P. & F. CORBIN DIVISION,

DUNCAN SHAW,

General Sales Manager.

Some Thoughtful Suggestions on Present-Day Problems

Youngerman-Reynolds Hardwood Co.
Inc.

Montgomery, Ala.

Editor Manufacturers Record:

It seems that the Government has done nothing but make mistakes in all it has attempted to do. What no one seems to have reckoned with has been the undoing of us all; that is, the inescapable Law of Supply and Demand. In our own industry we have learned very late that this law is one we cannot break with impunity. So it is in practically every other industry. And there was so much that might have been done long ago to equalize supply and demand if only men had been fair with themselves and recognized the dilemma we were in and set to work to right it as best they could. In our industry, many millions of dollars worth of timber has been cut, made into lumber and is now rotting because there are no markets. Resources that cannot for generations be replaced, if ever. The same thing has happened in countless other industries. And now all of us are rotting through a crisis, the severity of which could have been lessened very much if not largely surmounted by intelligent, thoughtful consideration by men not intent on personal gain.

When this crisis first broke we all knew that there were vast surpluses of almost every conceivable commodity. There was no intelligent attempt made then to do anything about disposing of these surpluses. Two and a half years later we still have done nothing constructive about making disposition of them. In the meantime, possibly 25,000,000 people in this country have not been able to secure the bare necessities of life. There is something radically wrong when a nation of people are so phlegmatic as

to permit such a situation to exist. Today, on almost every hand we hear people saying the Government should do something about the matter. Unfortunately, the kind of men who might help the people of this country out of the hole they are in are not elected to places of power in the Government. If any are in such offices their numbers are so much in the minority they can do nothing about the things that need to be done. One of the faults of our form of Government is the fact that it elects to office vote-getters and not statesmen. So it is little wonder these men resort to price-fixing or some other form of artificial means to try to do something when things are out of joint. They probably do the best they can, being largely just vote-getters.

Everyone knows we are facing a terrible national crisis now. In 1917, there was a mighty foe outside our gates, as it were. Today, an even more powerful foe is stalking abroad in the land. Then we had much ado by big men who rose up and offered their services to the Government at \$1 per year. Where are those men today? Not all dead, surely. But today we do not hear of anyone offering such service. Where are they in this hour of our nation's travail? If ever we needed men to do something we need them today. Hungry grown-ups may understand how it is to be that way with vast storehouses running over with the necessities of life. But there are growing up youngsters now who cannot understand such a strange anomaly. There are no doubt thoughts being born in the minds of these young men and women today similar to thoughts young Frenchmen dreamed who later overthrew Louis XVI. But we can come closer and imagine Russians living today who dreamed and put into execution their dreams when they put away the last of the Czars. Unless we beware, out of the suffering existing in this country today will arise things to make us pause.

It is so easy to criticize, you will say, and so it is. To me, just an average business man, here are some things that might have been done. Half the time during the last two and a half years I could have given to the state, with no loss and probably much gain to my business and surely to the industry I am engaged in, and certainly to future generations. We have had many employees who would gladly have worked for food and clothing during the last one and a half years. There are thousands of acres of land in this and adjoining counties unfit for anything except forests. Under my supervision these men could have been usefully employed. They could have been transported to and from work with but little cost. And the food and clothing they have been in a large measure without could have come from the surpluses existing, made fit for use in the nearest factories without profit to the owners; and so created a cycle of consumption which would have long ago tended to equalize the law of supply and demand.

Critics will say that this might work in the lumber industry but not in other industries. From out of the window of the office in which I write this at Prattville, Ala., I can look over several thou-

sand acres of good, tillable, agricultural lands. Much of this acreage is owned by one of the large insurance companies and was acquired by default. In all probability this insurance company has had and may even yet have among its policyholders men and women who were reared on the farm and who were lured to the cities by high wages some ten or twelve years ago. A simple questionnaire would give the necessary information and put back on the farm men who know how to make a living from the soil. Probable objects of charity in the city, they would become self-sustaining on the farms, and it is within the realm of reason for them to become again homeowners. Such a scheme has possibilities though we have not heard of any of the insurance companies attempting it. And a number of the big ones now own land that must seem like a millstone around their necks, with waste and desolation creeping over acreage that once bloomed with plenty.

Dreams, idle dreams these may be. But we must dream and put into execution our dreams to try and do something about conditions as they are today. A calm, courageous industry that knows not fear and not government must work out of the pit we are in. All must make sacrifices and we must demand that city, state and Federal governments do the same.

G. C. YOUNGERMAN.

Contractors Adversely Affected by Bad Bidding Practices

Gray Artesian Well Company
Water Supply Contractors
Pensacola, Fla.

Editor Manufacturers Record:

We heartily endorse the stand you have taken against unethical bidding practices, the prevalence of which the depression has thrust into all lines of business, especially contracting. All contractors are struggling to survive.

If some check to the present practice is not brought about quickly we will all be exterminated, and the public will have to pay the penalty when business does start up again.

We assure you of our vigorous support and co-operation.

M. J. GRAY, General Manager.

Pointing the Way

Winchester, Virginia.

Editor Manufacturers Record:

I consider the MANUFACTURERS RECORD to be the current "American Blue Book" on American progress, and an authority of untold value for the building, construction, industrial and manufacturing interests of the South and Southeast. Every firm or individual engaged in any of these lines who wishes to keep abreast of business conditions in these unsettled days ought to be a subscriber.

WM. E. SULLIVAN.

IRON, STEEL AND METAL MARKET

Steel Production Down

Pittsburgh, June 6—[Special.]—Steel ingot production last week was at about 20 per cent of capacity, when the first four weeks of May had averaged about 22½ per cent, against 21½ per cent in the preceding month, the low month in the whole depression.

The holiday seems to have been responsible for last week's decrease. Producers are reluctant to predict improvement in the next two months over the general May rate, asserting that practically everything depends on what is done at Washington and the reaction to it in financial and business circles. Ordinarily there would be seasonal decrease but these are not ordinary times, there having been no seasonal increase earlier in the year.

For May and June the automobile industry is absorbing 15 to 20 per cent of all the steel made, somewhat below the usual proportion for the time of year. From May to June, Ford requirements increase and requirements of the remainder of the industry decrease, approximately balancing.

Fabricated structural steel awards reported in the last two weeks totaled about 50,000 tons, almost double the previous average, since the first of the year, and following seven weeks of particularly light lettings. More contracting is expected for the next two or three weeks, and fabricating shops will probably take more steel from mills in the next two months than they have in the last two, but the long range future of fabricating is not so promising. While mills may have firmed up in their prices on the plain shapes, prices on fabricated steel do not indicate it.

Railroad absorption of steel is very light, although slightly better than early in the year. Pennsylvania Railroad releases on fabricated structural steel for the New York to Washington electrification are expected very shortly.

Finished steel prices are well maintained all along the line, but some recently expected advances for third quarter will not be made. Wire mills have opened third quarter order books at unchanged prices and no change is expected in bar, shapes and plates although no announcement has been made. Sheets and strips are altogether likely to be advanced, in line with a \$2 a ton advance in semifinished steel.

The Lake Superior iron ore market for the season has not opened, there having been no inquiry for ore, two months later than the usual time for opening.

In recent years very little business has been done, consumers having supplies of their own. No change is expected from prices of the last three seasons.

Steadiness in the Metals

New York, June 6—[Special.]—The metal markets are generally steady in price and quiet. Zinc is holding firm to the price of 2.85c per pound, East St. Louis, after its rapid advance of \$12 per ton late in May. The price of zinc ore was boosted \$4 per ton in one week in the Oklahoma district, to \$18 per ton, the most rapid rise since the war.

Copper seemed a bit firmer at the beginning of the week but at the middle became somewhat easy in undertone. Lead has been the same in price since late in March, but recent sales have been small by contrast with the marked activity of recent weeks. The tin market turned buoyant at the middle of the week when the four principal tin producing nations agreed on a further curtailment effective June 1, whereby production is to be carried on at the rate of 54,000 tons yearly as against the present rate of 91,000, comparing again with 162,000 tons produced in 1929.

Industrial conditions generally show but little change. Steel production is down to 23 per cent of capacity as against 25½ per cent at the recent peak but this is partially offset by the better prospects for new orders. The production of Ford automobiles in June promises to be 50 per cent ahead of that for May. Structural steel is the most active since early April and implies the use of larger quantities of non-ferrous metals in construction, such as lead, copper, zinc and tin. Commodity prices generally have dipped to new low levels for the depression but because of the market rise in zinc the metals as a class were an uplifting influence.

The domestic price of copper has been ranging from 5¼ to 5¾c per pound, but as the week progressed the cheaper price came into the ascendancy at the expense of the higher quotation. The special price of the custom smelters for export has been 5½c per pound, c. i. f. European ports, but copper has been available from independent producers, or those not members of the export association, as low as 5.20c. Export sales per day ranged from 85 to 500 tons.

If the duty on copper passes both houses of Congress, no great rise in the price of copper is expected. In other words, a duty is not regarded as a pana-

cea but just one important step to set the house of the copper industry in order.

Complete copper statistics for 1931 appeared for the first time during the past week when the American Bureau of Metal Statistics issued its year book. Stocks of refined copper at the end of last year were 544,278 net tons as against 367,175 tons a year previous. Total stocks of blister and refined metal at the end of the year were 722,014 tons as against 585,974 tons a year before. Surplus stocks of refined metal gained over 64,000 tons during fourth quarter, figures which heretofore have been lacking since the Bureau discontinued statistics at the end of third quarter.

Hopeful for Third Quarter

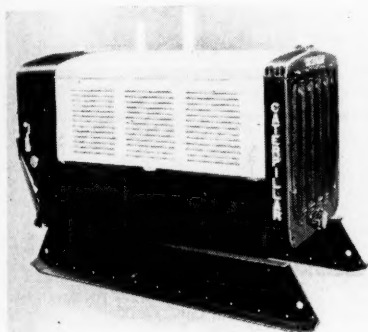
Birmingham, Ala., June 6—[Special.]—While there usually is a seasonal let-up in steel, a feeling of encouragement is noted in the district in the belief that the summer will see a turn for the better. Based on possibilities growing out of Federal aid in finance and construction, industrial leaders here, the iron and steel manufacturers and fabricators of both metals, confidently expect a demand that will be felt in the third quarter of the year. Based on ingot production, the steel mill operations in the district are down to 23 per cent capacity, with four and five open hearth furnaces producing at Fairfield, with the Tennessee Coal, Iron & Railroad Company, and two of the smaller open hearths at Gadsden, with the Gulf States Steel Company. The latter company has had its blooming mill, bar mill, wire and nail mill and other departments of its works at Gadsden in fairly steady operation the past week and have scheduled the plate, sheet and other mills for this week, meeting a demand of customers which have for years been patrons of the concern.

Federal aid in road building is expected to develop business in the very near future, in Portland cement, reinforcing concrete steel bars and in structural steel for bridges wherever the same may be needed, while government structures are also under project in various parts of the Southern territory supplied by the Birmingham district. One railroad extension job has come to light and contracts for grading and other work thereon are being let, a line between Meridian, Miss., and Myrtlewood, in Alabama. Some of the Southern railroads have yet to buy rail and accessories for this year.

NEW AND IMPROVED EQUIPMENT

Stationary Units

Heading a line of tractor motors adapted for stationary and industrial power uses, as announced by the Caterpillar Tractor Co., Peoria, Ill., the Caterpillar Diesel is a $6\frac{1}{2} \times 9\frac{1}{4}$ -inch, 4-cylinder engine turning at 700 RPM. It is of simple design and construction, with de-

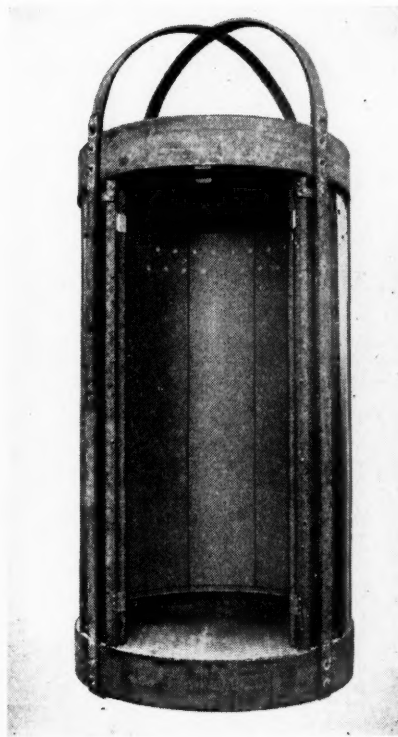


A Caterpillar for Industrial Power Use

clared economy of operation. The engine is said to burn a minimum of fuel, using a grade selling at a low price. The next engine in the Caterpillar line is the Sixty-Five, a 4-cylinder, $7 \times 8\frac{1}{2}$ -inch motor turning at 650 RPM. The Caterpillar Fifty, Thirty-Five and Twenty-Five engines closely resemble each other in design, construction and relative performance.

Gas Holder Elevator Installation

The Warner Elevator Manufacturing Company, Cincinnati, Ohio, recently completed an unusual elevator installation on a 1,500,000-cubic foot gas holder designed and erected for the Consumers Power Company, Kalamazoo, Mich., by the Stacey Brothers Gas Construction Company, Cincinnati, a division of International-Stacey Corporation, Columbus, Ohio. The installation included both interior and exterior elevators, the former of special design and construction, having a travel of 175 feet within the tank. The cage, which is cylindrical with a weight of approximately 1500 pounds, travels without guides in order to eliminate fire hazard due to metallic contact. Operating mechanism is in a pent house atop the tank and outside the actual chamber. A Warner Control is used, equipped with Timken bearings, including motor, and all switches operate in oil as additional fire preventive. Four American steel cables are attached at four points to prevent swing of cage. The interior elevator is used for inspec-



Cylindrical Car for Interior Operation

tors and service men. A conventional type, four by five, Warner elevator was installed to operate on the outside to the full height of the gas holder.

Unit Coolers for Factories

With comfort cooling for summer becoming "as much a requisite in many types of factories as winter heating," the Trane Company, La Crosse, Wis., has adapted its extended surface heat transfer unit, widely used in heating and ventilating fields, to the cooling field. One model consists of a cabinet unit for combination winter heating and summer cooling, with water, brine or direct expansion refrigerant. Other models include suspended and concealed types for various installations.

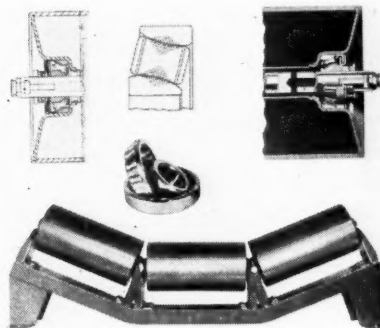
Oil Burning Furnace

A "radically new and superior type of oil burning furnace, utilizing heavy and less costly domestic fuel oils," has been developed by engineers of General Electric Company, Schenectady, N. Y. This new unit will be completely assembled at the factory; thus, it will not be an attachment that can be added to any existing furnace. The principle of combustion is declared to be such that the

unit not only operates without noise but emits practically no soot or dirt from the chimney. The entire apparatus is enclosed in steel, requiring practically no attention, being so designed that even the motor need not be oiled nor the thermostat clock wound. Hot water for the bath and laundry is economically produced the year around, and during summer months when the unit is not required for home heating, the burner will automatically keep the storage tank, attached to the furnace, filled with hot water.

Anti-Friction Conveyor Carrier

The Barber-Greene Company, Aurora, Ill., manufacturers of standardized material handling machines, announce a new Anti-Friction Conveyor Carrier which incorporates certain improvements and simplifications. Roller bearings (Shafer) are of exclusive design, being self-aligning and taking thrust as well as



Barber-Greene Carrier of Improved Design

radial load. Each size of carrier has but one size roller unit, making units and component parts interchangeable. For replacements, the Barber-Greene carrier is made to interchange with any standard carriers. The roller is of $5\frac{1}{2}$ -inch diameter seamless tubing No. 9 gauge metal; ends of pressed steel with outer roller race inserted under pressure; inner tube $1\frac{1}{8}$ -inch diameter with two shoulders, one at each end; spindle of selected cold rolled steel $\frac{3}{4}$ -inch diameter, drilled and tapped on each end for grease and Alemite, slotted to fit in the end brackets and provided with two flats to lock grease-seal washers. Rollers have rounded edges to protect the belt. Load rating of each roller bearing is 450 pounds. By using a factor of safety of $4\frac{1}{2}$, each roller may carry a load of 200 pounds, or the entire carrier a load of 600 pounds.

CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ala., Maxwell Field—See Want Section—Bids Asked.

Fla., Opa Locka—Bureau of Yards and Docks, Navy Dept., Washington, Lt. Lynch, Commanding Officer, U. S. Naval Reserve, receives bids June 22 for well, pump, pressure tank and pump house and same date for track, macadam road, conc. foundation and shelters, steel tanks, pumps, piping, electrical equipment and erecting mooring mast.

Fla., Pensacola—See Want Section—Bids Asked.

Fla., Sarasota—Sarasota Airways, Inc., chartered; G. G. Smith, Jr., L. Raoul.

Ga., Atlanta—See Want Section—Bids Asked.

La., Barksdale Field—See Want Section—Bids Asked.

La., Barksdale Field—Constructing Quartermaster receives bids June 30 for construction aprons, runways, electric conduit, etc. See Want Section—Bids Asked.

La., New Orleans—Lester F. Alexander Co., Inc., Audubon Bldg., low bidder at \$68,850, 33,000 square yards of fascine mattresses and 7500 tons of rip rap stone for underwater protection work at Shushan Airport for Orleans Levee Bd.; John Klorer, Ch. Engr. of Bd.; Caldwell Bros., 816 N. Howard Ave., Gen. Contrs. 5-19

La., Opelousas—Negotiations completed between American Airways Co., Fort Worth, Tex., and City for establishing airport at Jos. M. Bogani Landing Field, 1 mile south of city; leased field for 5 years.

Tex., Dallas—Fuller Construction Co., Republic Bank Bldg., Dallas, has contract at \$29,800 for establishing beacon sites on Dallas-Meridian Airway. 4-21

Va., Langley Field—See Want Section—Bids Asked.

Bridges, Culverts and Viaducts

Proposed Construction

Ark., Little Rock—Missouri Pacific Railroad Co., L. W. Baldwin, Pres., improve E. Sixth St. underpass jointly with Arkansas Power & Light Co., operator of street railway, and City of Little Rock; John L. Krumm, City Clk., advises details to be disposed of to enable construction to begin not later than March, 1933.

KENTUCKY—See Roads, Streets and Paving.

Mo., Kansas City—Jackson County opens bids June 14 for bridge work. See Roads, Streets and Paving—Proposed.

OKLAHOMA—See Roads, Streets, Paving—Proposed.

Okla., Tulsa—City, M. C. Sibley, City Engr., advises completion of plans for Quannah Street underpass in West Tulsa delayed pending right-of-way adjustment and settlement of controversy regarding widening of Eleventh Street bridge, which is adjacent to viaduct and part of same improvement program; action probable within next six weeks. 4-28

S. C., Beaufort—Beaufort County Bd. of Directors, Chas. G. Luther, Chmn., opens bids July 20 for construction of bridge over

Chowan Creek, on road from Beaufort to Frogmore post office; 120 ft. long; 137.31 cu. yds. class A conc., 40,214 lbs. rein. steel, 1654 lbs. galvanized rein. steel and 1000 lin. ft. conc. piles.

TEXAS—State Highway Dept., Gibb Gilchrist, Engr., Austin, returned bids on bridge over Intracoastal Canal, about 3 mi. south of Port Arthur, on Hwy. 87.

TEXAS—War Dept., Maj. Milo P. Fox, Dist. Engr., Galveston, preliminary plans under way for bridges over Intracoastal canal between Galveston and Sabine river.

Tex., Beaumont—Jefferson County Commrs. Court retained Craig P. Hazelet, Pres., Scherzer Rolling Lift Bridge Co., 53 W. Jackson Blvd., Chicago, for design of Intracoastal Canal bridge south of West Port Arthur.

Va., Richmond—Richmond, Fredericksburg and Potomac Railroad Co., E. M. Hastings, Ch. Engr., probably advertise for bids on Lombardy St. underpass soon after June 15; \$60,000; railroad to bear three-quarters of cost, city one-quarter. 5-26

Contracts Awarded

MARYLAND—State Roads Comsn., L. H. Steuart, Sec., Baltimore, let contracts for projects in following county:

Allegany—substructure and superstructure with exception of span over B. & O. tracks, Front St., Cumberland, Cumberland Contracting Co., Cumberland, \$89,562.

Mo., Chillicothe—American Bridge Co., 30 Church St., New York, has contract for 100 tons fabricated struc. steel, for Wabash Railroad bridge.

TEXAS—See Roads, Streets, Paving.
West Virginia—American Bridge Co., Frick Bldg., Pittsburgh, Pa., has contract for 500 tons of steel for two bridges over Guyandotte River, for Virginian Railway Co., A. M. Traugott, Ch. Engr., Norfolk, Va.

Canning and Packing Plants

Ga., Savannah—South Atlantic Canning Co., incorporated; A. R. Lawton, Jr., 26 E. Ryan St.

Tex., Groesbeck—W. F. Aiken Canning Co., capital \$12,000, incorporated; W. F. Aiken, J. M. Arendale, E. H. Hines.

Cotton Compresses and Gins

Tenn., Memphis—Callum & Robinson, 401 E. Mallory St., reported, rebuild burned cotton storage warehouse at Lauderdale and Mallory Sts. 5-5

Tex., Anton—Lone Star Co-Operative Gin Co., incorporated; George A. Broom, Harvey Love, J. H. Lyda.

Cottonseed-Oil Mills

Tex., Houston—South Texas Cotton Oil Co., incorporated; H. M. Lovett, 2022 Bissonet St.

Drainage, Dredging and Irrigation

Alabama—War Dept., U. S. Engineer Office, 904 Bell Bldg., Montgomery, receives bids in quadruplicates June 28 for furnishing all labor and materials and performing all work for dredging Pensacola-Mobile Intracoastal

Waterway from mouth of Portage Creek, Ala., to 11 foot hydrographic contour in Bon Secours Bay, Ala., comprising 5,335,000 cu. yd. place measurement.

Arkansas—War Dept., Patrick J. Hurley, Sec., approved an allotment of \$39,000 for dredging White River in Arkansas to navigable depth of 4½ ft. from its mouth to DeValls Bluff, distance of 125 miles; Major Brehon Somerville, Dist. Engr., Memphis, Tenn.

Florida—U. S. Engr. Office, Jacksonville, plans beginning work in July or August on 3 proposed cutoffs on St. Johns River between Deland and Sanford; right of way for Snake Creek cutoff lying south of Blue Springs, secured.

Fla., Allenhurst—Shell Producers Co., P. O. Box 745, Tampa, awarded contract at \$14,336 for removing approximately 32,062 cu. yds. place measurement, of rock and soft material from the Haulover Canal at Allenhurst and constructing dikes to extend that canal. 5-19

Fla., Fort Lauderdale—Broward County Commrs. authorized H. C. Davis, Engr., to prepare estimates and receive bids for dredging New River inlet to accommodate coast guard vessels at base six.

N. C., Wilmington—House Rivers and Harbors Committee, Washington, tentatively approved army engineers' recommendations for improving of Smith's Creek, vicinity Wilmington; provide channel 100 ft. wide 12 ft. deep.

Tex., San Antonio—Standard Dredging Co., Guaranty Bldg., Galveston, has contract at \$150,000 for dredging 148,000 cu. yds. from Double Bayou Channel and Anahuac Channel.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ala., Maxwell Field—See Want Section—Bids Asked.

D. C., Bolling Field—See Want Section—Bids Asked.

Miss., Greenville—Buffalo Gasoline Motor Co., Buffalo, N. Y., has contract for purchase and installing gasoline engine and generator set together with all switching equipment.

N. C., High Point—Duke Power Co., Charlotte, reported, made city tentative offer for 60-yr. light and power franchise; Leroy Briggs, Chmn. Public Works Comn.

Fertilizer Plants

Fla., Fort Pierce—Growers Fertilizer Co., J. E. Nobles, Pres., P. O. Box 46, recently organized, erecting fertilizer plant north of city; machinery purchased from Atlanta Utility Works. 6-2

Flour, Feed and Meal Mills

Tenn., Columbia—City Mill & Grain Co., capital \$25,000, incorporated; J. Howard Murphy, C. E. Kennedy.

Foundry and Machine Plants

Tex., Fort Worth—Fort Worth Well Machinery and Supply Co., changed name to Well Machinery and Supply Co.

Tex., Waco—Alamo Boiler & Iron Works, 114 Franklin St., changed name to Alamo Boiler and Machine Works; increased capital to \$25,000.

Garages and Filling Stations

Ark., Jonesboro—Central Chevrolet Co., capital \$20,000, incorporated; W. R. Weaver, O. N. Sanders.

Fla., Miami—Johnson Battery & Gas Co., incorporated; C. E. Johnson, 1212 N. W. 5th Ave.

Ga., Columbus—E. F. Hettick, Norris Bldg., Atlanta, has contract for service station for Wofford Oil Co., Spring St. N. W., Atlanta; brick; comp. roof; struc. steel. 3-3

Ky., Bowling Green—513 Tire and Battery Co., incorporated; F. E. Vaden, Rodes K. Myers.

Ky., Calhoun—Holder Motor Co., capital \$15,000, incorporated; Harry C. Holder, Sr., Charley L. Blauvelt.

Ky., Glasgow—Glasgow-Henry Motor Co., capital \$12,000, incorporated; E. R. Brown, C. B. Henry.

Md., Baltimore—Lord Baltimore Filling Stations, Inc., considering erecting filling station Oak Hill Ave. near 20th St.

Md., Baltimore—Standard Oil Co. of New Jersey, Franklin and St. Paul Sts., erect gasoline station Pennington Ave. and Olmstead St.; brick and stucco.

Md., Baltimore—C. N. West, care of Harry Silver, Court Square Bldg., erect filling station, Park Heights and Quantico Aves.; 1 story; brick and stucco.

Md., Baltimore—Boumi Temple, Mystic Shrine, Emerson Hotel, erect filling station S. W. cor. Howard and Druid Hill Ave.; Central Parking Co., 309 W. Franklin St., Lessee.

Md., Baltimore—Lord Baltimore Filling Station wrecking buildings for service station Pratt & Hanover Sts.; 1 story; brick and stucco, comp. and metal tile roof, 25x80 ft., \$10,000. Mullian Contg. Co., 3945 Greenmount Ave. has contract.

Md., Baltimore—Sachs, Nechamkin & Co., erect filling station N. E. Cor. Fayette St. and Fallsway.

Miss., Yazoo City—Welch & Courtney, have contract to erect filling station Main St. for Larry Chaney.

Mo., Joplin—Hi-Way Oil & Gas Co., incorporated; Claud S. Banks, George J. Young.

Mo., Kansas City—Western Oil & Gas Co., capital \$18,000, incorporated; E. B. MacDowell, 3145 Karnes Blvd.

Mo., Springfield—J. E. Garbee, Holland Bldg., has contract for super service station Kimbrough Ave. and McDaniel St. for Phillips Petroleum Co.; erect 2 brick buildings; install complete equipment for washing and greasing.

Mo., St. Joseph—Mack Parking Stations, Inc., chartered; John W. McClure, A. J. McNally.

N. C., Dunn—J. W. Thornton Garage, erect storage and service garage; cost \$80,000.

N. C., Winston-Salem—Carl Ogburn Tire Co., capital \$100,000, incorporated; C. D. Ogburn, E. M. Ogburn.

Okla., Oklahoma City—Harold H. Snyder, 1213 N. W. 36th St., let contract to Heierding Bros. for super service station, 13th St. and Broadway; 55x140 ft.; Spanish type architecture; Schumacher & Winkler, Architects, Hightower Bldg.

Tex., Beaumont—Willard H. Leicht Auto Co., Inc., incorporated; Wm. H. Leicht, Walter J. Leicht.

Tex., Rio Grande City—Gulf Coast Oil Co., reported, authorized 4-in. steel pipe line from Rio Grande oil fields to loading rack at Rio Grande City; erecting bulk oil storage and shipping plant at Corpus Christi; contemplates pipe line gathering system from Los Olmos oil pool, Starr County.

Gas and Oil Enterprises

Ark., Little Rock—Union Oil Co. 1018 Main St., incorporated; H. L. Girault, 529 E. 9th St.

Kentucky—S. T. Castleman, Martin Brown Bldg., Louisville, leased 932 acres northwest section of Simpson County; develop for oil and gas.

Ky., Owenton—Cities Fuel Gas Corp., capital \$50,000, incorporated; J. M. Gillum, W. E. Robinson.

Ky., Whitesburg—Home Gas & Oil Co., in-

corporated; S. A. Collins, B. F. Wright.

La., Shreveport—United Gas Public Service Co., controlled by United Gas Corp., Rusk Bldg., Houston, Tex., reported, authorized installation 14-mile welded steel pipe line from Rodessa gas field North Caddo Parish to former absorption plant of Magnolia Gas Co., Pine Island field; daily capacity of pipe line 5,000,000 cu. ft.

Okla., Bristow—See Tex., Fort Worth.

Tex., Fort Worth—Ohio Oil Co., O. D. Donnell, Pres., Findlay, O., reported, authorized expansion Marathon Oil Co.'s refinery at Fort Worth, including installation and remodeling work on cracking units; Marathon Oil Co. is refining and marketing subsidiary of Ohio Oil Co.; also make improvements to Marathon Oil Co.'s plant at Bristow, Okla.

12-17

Okla., Guthrie—City made tentative offer to Logan W. Carey, receiver and operator of Western Service Co., for purchase of gas distribution system, pipe line and contract for gas, subject to vote of people.

Okla., Ponca City—Marland Oil Co., of Oklahoma, organized with E. W. Marland, Pres., J. S. Alcorn, V. P.; plans acquiring properties in Kansas and Oklahoma; Skiles-Nixon Co., Wichita, Kansas, and Ponca City, Okla., offering, at par, stock of company.

6-2

Tex., Amarillo—J. S. Belt Helium Interests, reported, have plans by G. F. Preston, 813 Oliver Eagle Bldg., for 1 story, 50x50 ft., brick, rein. conc. and steel carbon monoxide plant.

Tex., Dallas—Southern States Oil Co., incorporated; W. J. Rutledge, Jr., Rep. Bank Bldg.

Tex., Fort Stockton—Cardinal Co., and Phillips Petroleum Co., Bartlettville, Okla., reported, build pipe line from field to Fort Stockton; build loading rack, and pumping station.

Tex., Houston—Channel Oil Co., incorporated; P. S. and Mendel M. Nussbaum.

Tex., Houston—Pine Lodge Oil Co., Inc., chartered; L. M. Josey, 3250 Del Monte Dr.

Tex., Houston—Quintana Petroleum Co., capital \$50,000, incorporated; Harry Holmes, Bankers Bldg.

Tex., Longview—Omega Oil Co., capital \$64,000, incorporated; L. D. Kelly, J. C. Barton.

Tex., Marshall—Canadian Production Co., capital \$15,000, incorporated; C. M. Beckett, Edmund Kay, Jr.

Tex., Mexia—Peyton Bros., Geo. L. Peyton, recently incorporated, advise company is manufacturing casinghead gasoline and will market dry gas from their properties in East Texas.

Tex., San Antonio—University Oil and Gas Corp., incorporated; C. W. Payne, Travis Bldg.

Tex., Sweetwater—Nolting Refining Co. increased capital to \$100,000.

Texas—Texas Producing Co., N. W. Hunter, Pres., Esperson Bldg., Houston, and 120 S. College St., Tyler, reported, transferred holdings in East Texas oil field to Tidal Oil Co., R. B. Pringle, V. P., subsidiary of Tidewater Oil Co., Bayonne, N. J.; properties include 84 acres land and 7 producing wells.

Tex., Tyler—Sea Gull Oil Corp., incorporated; T. F. McPhail, M. Siegel.

Tex., Waco—Steiner Oil Corp., incorporated; J. F. Haines, J. W. Edwards, N. F. Moncrief.

Tex., Weslaco—Texas Securities Co., incorporated; D. M. Howze, M. C. Steffens.

Ice and Cold-Storage Plants

Fla., Orlando—Florida Pre-Cooling Co., incorporated; J. B. Vaughman, R. L. Corbell.

Mo., Cuba—Meramee Ice & Fuel Co., capital \$15,000, incorporated; Thomas F. Bowdren, University City, St. Louis; E. B. Woodward, Cuba.

Okla., Boynton—B. H. Gile, Santa Fe Bldg., Dallas, Tex., and Okmulgee, plans improving Boynton ice plant; install machinery.

Iron and Steel Plants

Mo., North Kansas City, Kansas City—Acmedor Mfg. Co., chartered; Luther S. Swearingen, R. F. D. No. 3, Kansas City, Kans.; manufacture fireproof doors, etc.

Land Development

Fla., Daytona Beach—North Helen Land Co., incorporated; L. F. Law, A. M. Smith.

Fla., Daytona Beach—H. Gross, Inc., chartered; E. Jackson, H. Gross.

Fla., Jacksonville—Emery Co., Inc., chartered; E. H. Emery, 1700 W. Church St.

Fla., Jacksonville—Christopher Point Co., chartered; W. O. Boozer, 2245 St. Johns Ave.

Fla., Miami—R. P. Redman, 241 S. W. 21st St., clearing ground for constructing tourist camp, including houses, showers, etc., at N. E. 112th St. and Biscayne Blvd., Miami Shores, Miami.

Fla., Miami—McCrimmon Holding Co., incorporated; H. P. Emerson, 660 N. E. 68th St.

Fla., Miami Beach—Ellsee Co., chartered; W. J. Dunn, 835 Lincoln Rd.

Fla., Orlando—A. A. Northern, Inc., chartered; S. J. Northern, S. Glover.

Fla., Orlando—Central Corp., incorporated; F. S. Scott, W. O. Anderson.

Fla., Orlando—Wildwood Realty Co., incorporated; C. Mayer, W. H. Forsinger.

Fla., Pensacola—Fairline Hill Development Co., incorporated; F. E. Welles, J. A. Jacobi.

Fla., Tampa—Merrill National Corp., incorporated; A. R. Merrill, 215 Madison.

La., New Orleans—Fortuna Realty Co., capital \$88,000, incorporated; Peter Copland, 7800 St. Charles Ave.

Md., Baltimore—Echodale Construction Co., 1 E. 33rd St., incorporated; Wm. P. Pearson, Harry H. Pearson.

Md., Baltimore—Baltimore Holding Co., 105 N. Charles St., incorporated; Arthur E. Griffith, T. J. Mettee, Jr.

Md., Baltimore—Colonial Homes Co., S. W. Cor. Sedgwick Rd. and Cold Springs Lane, incorporated; T. Donald Elliott, 800 E. 33rd St.; Robt. A. Brady.

Mo., Kansas City—Goodacre Realty Co., incorporated; L. C. Thurman, First Natl. Bank Bldg.

Mo., St. Louis—Oxford Realty Co., incorporated; Arthur H. Fuldner, 484 Edgewood Dr.

Mo., St. Louis—Feldman Realty Co., capital \$35,000, incorporated; Jerome J. Schotten, 25 Brentmoor.

S. C., Rock Hill—Lincoln Cemetery Assn., incorporated; H. J. Martin.

Tex., Galveston—Leona Ranch, Inc., chartered; J. R. Patterson, C. N. Bk. Bldg.

Tex., Houston—Uptown Realty Corp., chartered; E. Hollingsworth, 1649 W. Main St.

Tex., San Antonio—Motes-Campbell Co., Paul A. Motes, Pres., Milam Bldg., acquired 2224 acres in Winter Garden Dist., about 11 miles southwest of Carrizo Springs in Dimmit County; develop for oil and land.

Tex., San Antonio—Sunland Estates, Inc., chartered; Charles D. Lovelace, Western Natl. Bldg.

Va., Norfolk—Sixty Hanson Avenue, Inc., incorporated; Joseph D. Deal, Reyster Bldg.

Va., Virginia Beach—Virginia Seashore Realty Corp., capital \$25,000, incorporated; W. R. Ashburn.

Lumber Enterprises

Fla., Blountstown—Midway Lumber Co., incorporated; A. W. Chambliss, B. Blair.

Fla., Panama City—Canal Timber Corp., incorporated; R. H. Gibson, G. P. Wood, T. L. Hines.

La., Cedar Grove, Shreveport—Allen Mfg. Co., E. H. Wheelless, Pres., rebuild burned lumber manufacturing plant.

Mo., St. Louis—St. Louis Stair Co., chartered; capital \$10,000; Ben A. Jostrand, 5944 Etzel St.

Mining

Fla., Williston—Connell & Shultz, mine operators, overhauling plant north of Williston; has contract from State Rd. Dept. for 18,000 tons of rock, will be shipped to Seminole.

Ga., Macon—Republic Mining and Milling Co., J. S. Hemphill, Supv. Engr., reported, extend bauxite mining operation in Sumter and Macon counties, near here; install new machinery.

Miscellaneous Construction

Ark., Barfield, P. O. Armored, Miss.—H. T. Brandenburg, West Memphis, constructing 2-mile levee on Mississippi River 9 miles east of here.

Arkansas-Missouri—U. S. Engr., Office, Memphis, Tenn., received low bid from Volz Construction Co., Baltimore Bldg., Memphis, Tenn., for excavation, embankment, conc. wall, etc., Item R-112, Caruthersville, Mo.; C. G. Kershaw Contracting Co., Martin Bldg., Birmingham, Ala., for excavation, embankment, conc. wall, etc., Item R-307B, Helena, Ark.

Arkansas—U. S. Engr. Office, P. O. Box 97, Memphis, Tenn., receives bids June 15 at U. S. Engr. Office, located on Arkansas side of Mississippi River, opposite Memphis, Tenn., to furnish labor, equipment, tools and materials and cut and dispose of weeds on Bird's Point, New Madrid Floodway Levee; Brehon Somervell, Dist. Engr.

Florida—U. S. Dist. Engr., Jacksonville, received low bid from Parkhill Dredging Co., Jacksonville, at \$3.73 per ton for repairing North and South Jetties at entrance to St. Johns River. 5-5

Florida-Georgia—Maj. Gen. Lytle Brown, Ch. of Army Engrs., Washington, ordered separate surveys for ship canal and for barge canal across southern Georgia and Northern Florida.

Louisiana—Bd. of State Engrs., New Orleans, making survey for levee system to extend from point near Bastrop to point 12 miles below Columbia; probably call for estimates in July; J. R. Adams, Asst. State Engr.

La., Baton Rouge—Hon. H. H. Lettissier, House of Representatives, introducing bill to provide funds to be used from regular Conservation Dept. appropriation to establish and equip fish reservation to be known as Catahoula Fish and Game Reserve, in Rapides and LaSalle Parishes; actual construction work probably will not start before 1934; area concerned is 8 miles wide and 20 miles long; erect 6 or 8 small dams and 1 major spillway and dam; cost about \$300,000.

La., Monroe—U. S. Engrs. Office, Vicksburg, Miss., Clark Kittrell, Capt., Corps of Engrs., Asst., advises that surveys for proposed flood control project for West Monroe are of preliminary nature; no contracts let and none contemplated at this time. 6-2

La., Rayville—Sam Abowitz, Arkansas City, Ark., has contract at 9.6 cts. for Buckhorn Bend new levee and enlargement in Tensas Basin Levee District, J. H. Hart, Sec., Delhi. 5-19

Mississippi—See Want Section—Bids Asked. Miss., Holly Springs—Bd. of Supervisors of Marshall County let contract to S. S. Owen, Mt. Pleasant, at 15 3/4 cts per cu. yd. for 3800 cu. yds. of earth work for levee at Duck Pond, 6 miles north of Holly Springs. 5-19

Missouri—Massman & Peterman, 519 American Bank Bldg., Kansas City, reported, have contract at \$71,525, for dikes Missouri River at Devils Island and Kinney Point. 4-21

Okla., Oklahoma City—City, Albert McRill, City Mgr., plans constructing levee along south bank of Canadian River from Robinson to Pennsylvania Ave.

Tex., Fort Worth—Quisile & Andrews, 2212 W. Seventh St., have contract for city incinerator; James T. Taylor, Ft. Worth, lately noted having contract, withdrew bid. 6-2

Miscellaneous Enterprises

Ark., Little Rock—Southwest Chemical Corp., incorporated; E. D. Chipman, 1315 W. 7th St.

Fla., Tavares—Best Cleaners, Inc., chartered; J. V. Douglas, L. M. Bowron.

Ky., Louisville—Re-organization of Inter-Southern Life Insurance Co., of Louisville, by formation of Kentucky Home Life Insurance Co., to take over its affairs was approved by Judge H. Church Ford, Franklin Circuit Court, Frankfort; will have capital of \$1,000,000.

Ky., Louisville—Lucky Strike Sirup and Beverage Co., incorporated; Francis J. Moss, 1657 Eastern Pkwy.

Ky., Louisville—Champion Wire and Iron Works, 417 S. Clay St., J. E. Zimmerman, Sec., contemplates enlarging welding plant.

Ky., Louisville—Southern Tobacco Co., incorporated; Frank Hendrickson, 4138 River Park Dr.

Ky., Scottsville—Farmers Loose Leaf Warehouse Co., erect \$50,000 warehouse Glasgow Highway.

Md., Baltimore—Maryland Pickle Products Co., chartered, 2805 Hudson St.; Maurice M. Leavitt, Munsey Bldg.

Md., Baltimore—De Luxe Baking Co., 461 Calvert Bldg., chartered; Foster H. Fanseen, Calvert Bldg.

Md., Cumberland—Cumberland Glass Co., chartered; Frank J. Gellner, George D. Hickie, Harold E. Messman.

Mo., Kansas City—Gene Mueller, Inc., Scarritt Bldg., chartered; George C. Doering, St. Louis; J. Grant Shrewsbury, Kansas City; dental laboratory.

Mo., Kansas City—Barker Monument Co., incorporated; Albert J. Stookey, 3008 Oak St.

Mo., Springfield—Alka Derma Co., incorporated; H. L. Yager, Dan McDonald; manufacture chemicals.

Mo., St. Joseph—Vale Bauman Paint Co., incorporated; Will V. Vale, M. F. Bauman.

Mo., St. Louis—Missouri Petroleum Products Co., incorporated; J. E. Fox, 130 Kenilworth Place.

N. C., Asheville—L. L. Merchant Constr. Co., 290 Biltmore Ave., has contract for erecting addition to dairy products plant at Biltmore for Biltmore Dairy Farm; 34x68 ft., brick and conc.; steel trusses; conc. and tile floor; asbestos shingle roof; cost \$15,000; Lord & Lord, Archt., 17 Church St.; S. R. Goldman, Constr. Engr. 6-2

N. C., Charlotte—Pyramid Life Insurance Co., Charlotte, and Pioneer Life Insurance Co., Greenville, S. C., consolidated; main office Charlotte; Eddie E. Jones, 2201 Hopedale St., Pres. of Pyramid Life Insurance Co., will be president of new company. 5-5

N. C., Charlotte—Shipping Room Service, Inc., capital \$30,000, incorporated; C. A. Cochran, Law Bldg.; manufacture office equipment.

N. C., Hickory—Piedmont Roofing Co., capital \$25,000, incorporated; G. R. Herman, Conover; R. V. Moss, Hickory.

N. C., Pinehurst—Hawes and Eckert, Inc., chartered; George P. Hawes, Jr.; engineering.

N. C., Raleigh—J. R. Pointer Cigar Co., capital \$100,000, incorporated; J. R. Pointer, 809 New Bern Ave.

N. C., Thomasville—Thomasville Coca Cola Bottling Co., capital \$50,000, incorporated; J. W. Boyles, P. A. Boyles.

Okla., Tulsa—Meno Chemical Products Co., capital \$24,000, incorporated; J. O. Brown, Oil Daniels Bldg.

Okla., Tulsa—Tulsite Chemical Co., J. H. Black, Atlas Life Bldg., plans improving plant.

S. C., Greenville—Greenville Clothing Mfg. Co., incorporated; Harry L. Fayonsky, Peter Theodore.

Tenn., Nashville—Universal Traffic Signal Co., Inc., chartered; J. W. Gillespie, 1208 18th St. S.

Tex., Dallas—Standard Contracting Corp., incorporated; J. L. Allhands, S. W. Life Bldg.

Tex., Dallas—Screen Advertising Co., Inc., chartered; Arthur S. Baron, 1322 Forest St.

Tex., El Paso—Out-Dor Pants Co., chartered; Rubin Cohen, Harold Potash.

Tex., Houston—Earths Products Co., E. G. Noxon, executive vice-president and general manager, 190 Glendale, recently organized, has acquired block of land in industrial section convenient to ship channel and railroad facilities; plans and specifications completed for building 75x300 ft.; feature of building will be the all-steel raw material storage bins, with capacity of 75 carloads; install modern equipment including automatic conveying system; proposed plant will be divided into 3 sections, one for preparation of bleaching earths, capacity of 300 tons finished materials daily. Another division will be used for preparation of stucco, plaster, high temperature refractories, asbestos, natural colored sands, aggregates, etc.; third division will be known as custom grinding division, and in addition to processing of materials from its own properties, will be equipped to do a general custom grinding of any non-metallic commodities. 2-25

Va., Kilmarnock—Menhaden Products, Inc., acquired Eubank-Tankard plant at Kilmarnock Wharf.

Tex., Houston—Thomas Ragsdale Hancock, Pres., Tosco Steamship Co., operating weekly service between Houston and New Orleans, acquired complete control of Tosco Steamship Lines, Inc., State Natl. Bank Bldg., and Gaston Steamship Co., holding company for Tosco Line and Texas Oceanic Steamship Co.

Va., Portsmouth—Special Ferry Committee will recommend to city at meeting of city and Norfolk County Supervisors June 14th that ferry fleet be modernized and 2 new boats constructed same type as City of Norfolk.

Va., Pulaski—Dixie Girl Frock Co., leased building on Valley St.; establish dress mfg. plant.

Motor Bus Lines and Terminals

La., New Orleans—Gentilly Route Sixty-One Co., Inc., capital \$50,000, incorporated; A. D. Danziger, New Orleans Bk. Bldg.

Md., Baltimore—Auto Taxi Service, 1600 Stephen St., chartered; 2850 shares, par value \$100; Charles F. Goldberg, Calvert Bldg.

Md., Baltimore—Public Service Comsn. granted permission to United Railways and Electric Co. to replace trolley service between Pikesville and Reisterstown with bus line. 6-2

Mississippi—J. E. Barber & Co. applied to Mississippi Railroad Comsn., Jackson, for franchise to operate bus line Memphis to New Orleans, running over 3 highways; John G. Minniece, Meridian, for motor bus Aberdeen to Muldoon.

Miss., Meridian—Mobile & Ohio Transportation Co., incorporated; R. E. Wilhourn, J. G. Minniece.

Mo., Kansas City—Julian Warnock, Lathrop Bldg., Kansas City, applied to State Public Service Comsn., Jefferson City, for permission to operate bus line between Kansas City and Bagnell Dam; will be known as Lake of Ozarks Transit Co.

Mo., Maplewood—Maplewood Moving Co., capital \$20,000, incorporated; L. J. Stoepelman, 1415 Commonwealth.

N. C., Charlotte—Queen City Lines, Inc., capital \$200,000, incorporated; L. A. Lowe, Concord; H. H. Hardison, Wadesboro.

Oklahoma—Southern Kansas Stage Lines Co., A. H. Hall, Traffic Mgr., Wichita, Kansas, advises purchased Ward Way Bus Lines in Oklahoma; are consolidating this line with Southern Kansas Stage Lines and will operate from general headquarters at Wichita; at present time no building or construction work contemplated; may purchase some equipment later. 6-2

Tenn., Chattanooga—Tennessee Electric Power Co. plans relinquishing 3 of its street car franchises and substituting bus lines.

Virginia—State Corporation Comsn., Richmond, reported, authorized Greyhound Lines, 1157 S. Wabash Ave., Chicago, Ill., to operate bus lines between Norfolk and Richmond, via Suffolk.

Railways

Tenn., Nashville—Louisville & Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, Ky., reported, let contract to Fairbanks, Morse & Co., Chicago, Ill., for rein. conc. locomotive coaling plant, of direct coaling type, operated by push button control from locomotive tender; elevating capacity 90 tons coal per hour.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ala., Mobile—Mobile County, J. R. Peavy, Highway Engr., opens bids June 6 for 1-course conc. north approach to Three Mile Creek Bridge, Telegraph Road.

D. C., Washington—Lieut. Col. U. S. Grant 3rd, Director of Public Parks and Buildings, opens bids June 14 for constructing roads, curbs, gutters, water supply and drainage systems, etc., on Mall bordering 14th St., including north drive in front of National Museum and highway in front of Agricultural Bldg. 6-2

D. C., Washington—Public Buildings and Public Grounds Comsn. surface road, 7th to 15th St., conc. base, curb, gutters and drains, bituminous surface.

GEORGIA—State Highway Board, Atlanta, soon to pave Dixie Highway, between Rome and Chattanooga, in Chattooga County.

GEORGIA—State Highway Bd., J. W. Barnett, Chmn., Atlanta, opens bids June 15 for project in following county:

Jasper—3 mi. asphalt for Monticello-Corvinton road.

Ga., Macon—Bibb County Commrs., T. W. Clifton, Clk., negotiating with State Highway Dept. for grading Route 57, Macon to Irwinton, with present county forces.

KENTUCKY—State Highway Comsn., Frankfort, opens bids June 29 for projects in following counties:

Christian—11.5 mi. surface, Hopkinsville-Madisonville Road (U. S. 41); 4.5 mi. grade and drain, Hopkinsville-Dawson Springs Road, bids separately on grading and on drainage; 16.4 mi. grade and drain Hopkinsville-Kirkmansville Road;

Clay—5.4 mi. grade and drain, London-Manchester Road;

Edmonson—8.25 mi. surface, Bowling Green-Cave City Road (U. S. 31W);

Green—7.9 mi. grade and drain, Greensburg-Edmonton Road;

Hancock—5 mi. grade and drain, Haws-ville-Fordsville Road, bids separately on grading and draining;

Henderson—5.9 mi. surface, Henderson-Dixon Road (U. S. 41), junc. with Corydon

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J. W. Bar-
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County road to Webster County line; 7.3
mi. Henderson-Dixon Road, junc. with
Corvdon County road to west of Hender-
son; separate bids on grading, drainage,
surfacing; paving fill slopes, east approach
to Spottsville Toll Bridge;

Knox—6.1 mi. grade and drain, Barbour-
ville-Tye's Ferry Road;

Lawrence—5 mi. grade and drain, Louisa-
Sandy Hook Road;

Leslie—6.7 mi. Hyden-Manchester Road;

Letcher—1.8 mi. Roxana-Elsiecoal Road,
including substructure and approaches for
bridge over North Fork of Kentucky River
at Roxanna; steel superstructure for this
bridge;

Logan—Overpass on Russellville-Lewis-
burg Road at Epley, 1 45-ft. and 2 40-ft.
rein. conc. deck girder spans, rein. conc.
piers and abutments;

Logan-Simpson—10 mi. grade, drain, sur-
facing, Russellville-Franklin Road;

Lyon—12.4 mi. grade and drain, Eddyville-
Birmingham Road;

Muhlenberg—9.8 mi. surface, Greenville-
Nortonville Road (U. S. 62);

McLean—5.7 mi. grade and drain, Calhoun-
Livermore Road;

Rowan-Elliott—12.8 mi. grade and drain,
Wagoners Store-Wrigley Road;

Russell—1.8 mi. grade and drain, James-
town-Albany Road;

Scott—Bridge over Elkhorn Creek near
Georgetown, on Georgetown-Williamstown
Road (U. S. 25), 80-ft. steel span with conc.
floor, using high early strength cement;

Warren—8.5 mi. surface, Bowling Green-
Cave City Road (U. S. 31W);

Whitley—17.4 mi. Corbin-Cumberland Falls
Road.

Ky., Lexington—City Manager opens bids
June 10 for reconstructing and widening
various streets.

LOUISIANA—State Highway Comsn., A.
P. Tugwell, Chmn., Baton Rouge, has low
bids for grading and gravel surfacing pro-
jects in following counties, letting May 31:

Rapides—7 mi. Ryland Levee, RRA-13,
Gueess & Albin, Jonesboro, La., \$3260; 3 mi.,
Harris Ferry Levee, RRA-14, Gueess & Al-
bin, RRA-14;

St. Charles—1.3 mi., Pelican New Levee,
L-H, J. B. LeBlanc Construction Co., Inc.,
St. Gabriel, La., \$5651; .8 mi., Speranza Le-
vee, J. B. LeBlanc Construction Co., Inc.,
\$3995; on Good Hope New Levee, J. B.
Campbell Co., 1008 Orleans St., New Orleans,
\$3847;

West Baton Rouge—2.4 mi., Lobdell-Viola
Levee, A-44, Robinson & Young, 912 Louisi-
ana Nat. Bldg., Baton Rouge, \$6320.

La., New Orleans—Commission Council re-
ceived low bid from Craven & Lang, for re-
surfacing Napoleon Ave. and LaSalle St.

MARYLAND—State Roads Dept., L. H.
Stewart, Sec., Baltimore, opens bids June
14 for projects in following counties:

Calvert—470 ft. steel sheet piling bulkhead,
along Patuxent River at Solomon's Island,
C-55-811.

Carroll—7.13 mi. conc. shoulders and conc.
roadway, Taneytown Pike, CI-107-511 FA
Proj. 256;

Worcester—1.89 mi. conc. Snow Hill-Whit-
ton Road, Wo-112-14 FA Proj. 250; 3.19 mi.
conc. shoulders, Snow Hill-Pocomoke Road,
Wo-122-111, FA Proj. 254.

MARYLAND—State Roads Comsn., L. H.
Stewart, Sec., Baltimore, has low bids for
projects in following counties:

Frederick—8.98 mi. conc. shoulders and
conc. roadway, Liberty road, F-189-511 FA
Proj. 257, Thomas, Bennett & Hunter, West-
minster, \$115,983;

Somerset—1.88 mi. conc., Westover-Fair-
mount road, S-55-12, Hannaman-Burroughs
Co., Salisbury, \$25,371.

Md., Baltimore—City, George Cobb, High-
ways Engr., opens bids June 15 for Cont.
622, 12,500 sq. yds. cement conc., and Cont.
623, 14,800 sq. yds. cement conc., Prettyboy
Dam area.

Mo., Clayton, St. Louis—St. Louis County,
Roy Jablonsky, Highway Engr., has low
bid of \$102,927 from Wm. A. Riley Construc-
tion Co., 6221 Olive Blvd., University City,
for 4.36 mi. rein. conc. pavement, 20 ft. wide,
Clayton Road, Lindbergh to Mason, Proj.
750.

Mo., Cape Girardeau—City, E. L. Sailer,
Engr., advises has plans under way for pre-
paring for resurfacing Bloomfield and Bend
roads inside of city limits; 1 3/4 mi. 20-ft.
bituminous macadam; drainage installed.

6-2

Mo., Kansas City—Jackson County High-
way Engineering Dept., Leo E. Koehler, Engr.,
opens bids June 14 for following:

100-ft. grade separation structure, over
Alton R. R., Nolan St. Road, 10.6 cu. yd.
class A, 100 cu. yd. class B and 113 cu. yd.
class X conc. masonry, 36,400 lbs. conc.

masonry reinforcement, 260 cu. yd. excava-
tion.

3.747 mi. grade, drain, paving, and con-
struction of grade separation struc., Sterling
Ave. Road, 94,697 cu. yd. class A and 481
cu. yd. class B excavation, 31,669 sta. yds.
overhaul, 5387 cu. yd. jetting fills, 43,259 sq.
yd. Portland cement conc. pavement, 973 cu.
yd. class B conc. masonry, 95,895 lb. rein.

for masonry, 1857 lin. ft. 15-in., 132 lin. ft.
18-in. F. E. and S. R., 18 lin. ft. 24-in. P. E.
pipe culv., 216 lin. ft. 24-in. vit. clay pipe
culv., 25 barricades, 14 relocating barricades,
2688 f. b. m. timber in ditch checks, 2248 lin.
ft. conc. curb and gutter, 3 grating and bear-
ing plates; bridge at sta. 152/44, 540 lin. ft.
creo. piles in place, 36 lin. ft. creo. pile cut-
offs, 85 cu. yd. class B, 22 cu. yd. class X
conc. masonry, 5760 lb. conc. masonry rein.,
1200 lb. fab. struc. steel, 375 cu. yd. excav.

for bridge, 500 lin. ft. temporary track, steel
erection, 2 paint coats;

37-ft. bridge, Sterling Ave. Road, 9.1 cu.
yd. class A, 185 cu. yd. class B, 43.2 cu. yd.
class X conc. masonry, 26,500 lb. conc. ma-
sonry rein., 375 cu. yd. excav. for bridge, re-
moval of old bridge, temporary crossing;

6.733 mi. grade, drain, paving, Courtney
Road, clearing and grubbing, 198,134 cu. yd.
class A, 37,968 cu. yd. class B, 941 cu. yd.
borrow excav., 954,687 sta. yd. overhaul,
196,655 cu. yd. jetting fills, 34,899 sq. yd.
18-ft. Portland cement conc. pavement, 43,100
sq. yd. 20-ft. lip type Portland cement conc.
pavement, 11,536 lin. ft. wood guard fence,
\$70.42 cu. yd. class B masonry, 89,003 lb.
rein. for conc. masonry, 416 lin. ft. vitrified
tile underdrain, 225 lin. ft. 15-in. F. E. and
S. R. and 45 lin. ft. 18-in. S. R. pipe culverts,
7 barricades, 6 relocating barricades, 12,768
f. b. m. timber in ditch checks, 38 outlet
basins, 808 lin. ft. outlet drains;

232 mi. grade, drain, paving, Hickmans
Mill Road, hedge pulling, 977 cu. yd. class
A excav., 45,451 cu. yd. excav. for embank-
ment, 44,964 cu. yd. jetting fills, 3384 sq. yd.
Portland cement conc. pavement, 1674 lin. ft.
wood guard fence, 46.92 cu. yd. class B conc.
masonry, 5943 lb. rein. for conc. masonry,
821 sq. yd. plain riprap, 3 barricades.

Mo., St. Louis—St. Louis County Court
received low bid of \$83,453 from Skrainka
Construction Co. for 3 mi. 20-ft. conc. pav-
ing, Tesson Ferry Rd., Butler Hill Rd. to
State Highway No. 77.

Mo., St. Joseph—City received low bid of
\$14,864 from Land Construction Co. for re-
surfacing of 150,000 sq. yd. paving with
light layer of asphaltic material and stone
chips; of \$15,136 from Consolidated Paving
Co. for gravel.

MISSISSIPPI—State Highway Comsn.,
Jackson, asphalt surface 18-mi. graveled high-
way, between Bay St. Louis and Louisiana
line.

OKLAHOMA—State Highway Comsn., Sam
R. Hawks, Chmn., Oklahoma City, opens
bids June 14 for projects in following coun-
ties:

Jefferson—7.094 mi. grade and drain and
four bridges, FAP 218-A, Hwy. 70, Waurika
east, Sec. A, roadway, 92,717 cu. yd. A
excav., 1273 cu. yd. B excav., 6837 cu. yd.
C excav., 393 cu. yd. A conc., 30,691 lb. rein.
steel, 140 lin. ft. R. C. pipe, 2 section mark-
ers; Sec. B, bridges, 125 cu. yd. A excav.,
365 cu. yd. A conc., 34,053 lb. rein. steel,
removal 4 bridges; 5.968 mi. grade and drain
three bridges, FAP 218-B, Hwy. 70, between
Waurika and Ringling, Sec. B, roadway,
90,916 cu. yd. A excav., 1464 cu. yd. B ex-
cav., 11,489 C excav., 310 cu. yd. A conc.,
33,849 lb. rein. steel, 112 lin. ft. 24-in. R. C.
pipe, 1 section marker; Sec. B, bridges,
4345 cu. yd. A excav., 589 cu. yd. A conc.,
56 cu. yd. A conc. (pier bases), 168 AA conc.,
494 lin. ft. R. C. hand rail, 143,700 lb. struc.
steel, 2850 lin. ft. untr. timber piling, 980 lin.
ft. rein. conc. piles, removal 3 bridges;
6.005 mi. grade and drain struc., two bridges,
FAP 218-C, between Waurika and Ringling,
Sec. C, roadway, 86,298 cu. yd. A excav.,
377 cu. yd. B excav., 3097 cu. yd. C excav.,
452 cu. yd. A conc., 38,917 lb. rein. steel,
42 lin. ft. 30-in. R. C. pipe, 1 section Marker;
Sec. C, bridges, 85 cu. yd. A excav., 209 cu.
yd. A conc., 18,141 lb. rein. steel, removal
2 bridges;

Major—Bridge, 3 mi. southwest of Ring-
wood, SAP 404 I, Hwy. 58, 6 3/6-ft. I-beam
spans, with 22-ft. roadway on 45° skew, 2200
cu. yd. A excav., 152 cu. yd. A conc., 153
cu. yd. AA conc., 40,300 lb. rein. steel, 434
lin. ft. rein. conc. hand rail, 108,800 lb. struc.
steel, 1463 lin. ft. rein. conc. piling;

Cotton—8.402 mi. grade and drain struc.,
SAP 726 D and E, Hwy. 70, east through
Emerson and Waters, Sec. D, 3.82 mi. road-
way, 101,915 cu. yd. A excav., 214 cu. yd.
B excav., 214 cu. yd. C excav., 336 cu. yd.
A conc., 29,511 lb. rein. steel, 44 lin. ft. 18-
in. R. C. pipe, 100 cu. yd. 24-in. R. C. pipe;
Sec. D, bridges, 4300 cu. yd. A excav., 365
cu. yd. A conc., 415 cu. yd. AA conc., 87,350
lb. rein. steel, 1320 lin. ft. rein. conc. hand
rail, 282,400 lb. struc. steel, 4320 lin. ft., creo.

timber piling, 9.6 M. f.b.m. creo. struc. tim-
ber, removal 5 bridges; Sec. E, 4.620 mi.
roadway, 51,758 cu. yd. A excav., 80 cu. yd.
C excav., 340 cu. yd. A conc., 28,830 lb. rein.
steel, 238 lin. ft. 18-in. R. C. pipe, 104 lin.
ft. 24-in. R. C. pipe; Sec. E, bridges, 105
cu. yd. A conc., 89,0 lb. rein. steel, removal
1 bridge;

Woodward—8.067 mi. grade and drain
struc., SAP 618 C and D, Hwy. 270, between
Vici and Sharon, Sec. C, 4.047 mi., 62,373
cu. yd. A excav., 521 cu. yd. B excav., 521
cu. yd. C excav., 217 cu. yd. A conc., 17,835
lb. rein. steel, 309 lin. ft. 18-in. R. C. pipe,
129 lin. ft. 24-in. R. C. pipe; Sec. D, 4.020
mi., 56,839 cu. yd. A excav., 1080 cu. yd. B
excav., 540 cu. yd. C excav., 179 cu. yd.
A conc., 15,088 lb. rein. steel, 223 lin. ft.
18-in. R. C. pipe, 67 lin. ft. 24-in. R. C.
pipe; Bridges, Hwy. 270, between Vici and
Sharon, 818 C and Sec. C, 400 cu. yd. A
excav., 250 cu. yd. A conc., 23,000 lb. rein.
steel; Sec. R, 3000 cu. yd. A excav., 226 cu.
yd. A conc., 276 cu. yd. AA conc., 56,820
cu. yd. rein. steel, 816 lin. ft. R. C. hand
rail, 196,000 lb. struc. steel, 2835 lin. ft.
R. C. piling, removal 3 bridges.

OKLAHOMA—State Highway Comsn.,
Oklahoma City, received apparent low bids
for following projects, bids opened May 31:

Lincoln—5.3 mi. roadway, Hwy. 66, Hyde
Construction Co., Enid, \$21,431; 5.3 mi. pav-
ing, Hwy. 66, S. O. Mazey, Durant, \$95,041;
two bridges, Hwy. 66, D. C. Sampley, Sul-
phur, \$22,748; bridge on Hwy. 48, north of
Stroud, W. L. James, Ada, \$9191; two
bridges, Hwy. 48, north of Stroud, W. L.
James, \$13,414;

Okla., Newkirk—Kay County Comms., J.
S. Clark, County Engr., opens bids June 10
for following, for road No. 1 extension: 18,900
gals. road oil, approx. 400 cu. yds. of sand,
for Road No. 8, 180 gals. road oil, approx.
3300 cu. yds. sand; for Road No. 1, 90,000
gals. road oil, approx. 2000 cu. yds. sand; for
Road No. 1, approx. 13,70 gals. road oil, 800
cu. yds. sand.

Okla., Oklahoma City—City probably ext-
end southeast 17th St.

SOUTH CAROLINA—State Highway
Comsn., Ben M. Sawyer, Ch. Commr., pave in
following county:

Anderson—Princeton Rd., business section
of Honea Path.

TENNESSEE—State Highway Dept., R. H.
Baker, Commr., Nashville, plans paving road
between Goodlettsville and Ridgeway.

TENNESSEE—State Dept. of Highways
and Public Works, R. H. Baker, Commr.,
Nashville, opens bids June 24 for project in
following counties:

Henderson-Decatur—7.8 mi. paving, Route
20, between Darden and Parsons.

Sumner-Davidson-Robertson—5.043 mi.,
Hwy. 11, between State Hwy. 41 and Ridge-
top;

TEXAS—State Highway Comsn., Gibb Gil-
christ, Engr., Austin, opens bids June 10
for project in following county:

Kimble—6.97 mi., Hwy. 27, Sutton-Kimble
County line, east and approaches to Buck
Hollow and Copperas Creek bridges, 73,603
sq. yd. double bituminous surface treatment,
150 hrs. rolling.

TEXAS—State Highway Comsn., Gibb Gil-
christ, Engr., Austin, considering projects
in following counties for letting on June 10:

Navarro—8.792 mi. conc., Hwy. 31, FAP
575-A U 11, 4537 cu. yd. excav., 763 M. gals.
jetting and ponding, 185,590 sq. yd. fine gr.
subgr. and shldrs., 31,994 cu. yd. sand
subgr. trt., 394,095 yd. mat. hauled addi-
tional 3/4 mi., 156 cu. yd. gravel surface ers.,
103,443 sq. yd. conc. pavement, 170,574 lbs.
rein. steel, 23,282 lin. ft. French drains, 13-
048 lin. ft. wire mesh guard fence;

Kerr—10.678 mi. double bituminous sur-
face treatment, Hwy. 41, FAP 520-B, U III,
617 hrs. extra rolling base courses, 633 M.
gals. sprinkling base courses, 2778 M. gals.
water hauled additional mi., 302 hrs. re-
shaping existing caliche base course, 7103
cu. yd. run cal. base ers., 85,775 cu. yds. mat.
hauled additional 3/4 mi., 4287 cu. yd. aggre-
gate for surf. trt., 91,413 gals. asphalt, 7103
cu. yds. crushing and screening caliche;

Concho and Menard—9.406 mi. grading and
small drainage structures, 41.7 acres clearing
and grubbing, 52,779 cu. yds. common rdwy.
excav., 3962 cu. yd. solid rock rdwy. excav.,
1201 dry chan. excav. A, 445 hrs. blading
embankment, 8693 M. gals. jetting and pond-
ing, 26,575 cu. yds. borrow, 92,038 sta. yds.
overhaul, 13,067 qtr. mi. yds. overhaul, 433
cu. yd. class A conc. for culverts, 27,300
lbs. rein. steel, 127 right-of-way markers;

Pecos—12.985 mi. grading and small drain-
age structures, Hwy. 27, FAP 618-B, 50.4
acres of clearing and grubbing, 112,592 cu.
yds. rdwy. excav., 22,340 cu. yds. solid rock
rdwk., 1384 cu. yd. backfill embankment,
9753 cu. yd. dry chan. excav., 446 cu. yd.
culv. excav. A, 808 hrs. blading embank-
ment, 808 hrs. rolling embankment, 375 hrs.

sprinkling embankment, 25,818 cu. yds. borrow, 82,086 sta. yds. overhaul, 40 cu. yds. grouted riprap, 890 cu. yd. class A conc., 108,956 lbs. rein. steel, 102 R/W markers; 12,031 mi., Hwy. 27, FAP 618-C, 63.2 acres clearing and grubbing, 88,163 cu. yd. rdwy. excav., 13,339 cu. yds. solid rock rdwy. excav., 28,286 cu. yds. dry chan. excav. A, 818 hrs. blading embankment, 818 hrs. rolling embankment, 696 hrs. sprinkling embankment, 34,801 cu. yds. borrow, 179,171 sta. yds. overhaul, 824 cu. yds. class A conc. for culverts, 97,220 lbs. rein. steel, 105 cu. yds. grouted riprap, 1446 cu. yds. backfill embankment, 147 R/W markers;

Comal—10.877 mi. grading and drainage structures, 10.8 acres clearing and grubbing, 146,995 cu. yd. rdwy. excav., 12,747 cu. yd. caliche rock rdwy. excav., 73 cu. yd. solid rock rdwy. excav., 8929 cu. yd. dry chan. excav., 120 cu. yd. wet chan. excav., 624 cu. yd. culv. excav. class A, 420 hrs. blading embankment, 1260 M. gals. jetting and ponding, 14,509 cu. yds. borrow, 97,232 sta. yds. overhaul, 328,038 qtr. mi. yds. overhaul, 1457 cu. yd. class A conc., 178,152 lbs. rein. steel, 44.2 cu. yds. mortar rubble masonry, 123 R/W markers, 390 lin. ft. 24-in. corr. galv. metal pipe, 203 lin. ft. conc. railing for str., low type;

Hemphill—13.603 mi. grading and small drainage structures, Hwy. 4, FAP 45-A, Reop. Unit IV and 45-sec. C, 127,003 cu. yds. rdwy. excav., 4929 cu. yds. solid rock rdwy. excav., 929 cu. yds. dry chan. excav., 2332 cu. yds. culv. excav. A, 915 hrs. blading embankment, 4733 M. gals. jetting and ponding, 132,752 sta. yds. overhaul, 913 cu. yds. class A conc. culv., 89,873 lbs. rein. steel, 34 cu. yd. dry riprap;

Crockett—9.130 mi. grading and small drainage structures, Hwy. 27, FAP 619-E, 14.05 acres clearing and grubbing, 51,002 cu. yds. rdwy. excav., 19,749 cu. yd. solid rock excav., 1473 cu. yd. backfill embankment, 1893 cu. yd. caliche rock rdwy. excav., 41,249 cu. yd. dry chan. excav. A, 108 cu. yd. dry chan. excav. C, 145 cu. yd. culv. excav. A, 587 hrs. blading embankment, 186 hrs. rolling embankment, 72 M. gals. sprinkling embankment, 1288 M. gals. flitting and ponding, 13,372 cu. yds. borrow, 69,448 sta. yds. overhaul, 2972 qtr. mi. yds. overhaul, 466 cu. yds. class A conc. culverts, 45,558 lbs. rein. steel, 136 R/W markers, 625 cu. yds. crusher run stone covering;

Bell and McLennan—13.305 mi. grading and small drainage struc., FAP 40-Reop. Unit II and 614-B, Hwy. 2, 8,632 acres clearing and grubbing, 175,323 cu. yds. rdwy. excav., 8036 cu. yds. solid rock rdwy. excav., 1510 cu. yds. dry chan. excav., 7775 cu. yds. dry chan. excav. A, 378 cu. yds. dry chan. excav. C, 441 cu. yds. culv. excav. A, 6358 M. gals. jetting and ponding, 29,840 cu. yds. borrow, 22,494 sta. yds. overhaul, 30,436 qtr. mi. yds. overhaul, 875 lbs. rein. steel, 112 lin. ft. 18-in. rein. conc. pipe, 239 lin. ft. 24-in. rein. conc. pipe, 255 R/W markers;

Lubbock—6.586 mi. grading and drainage, Hwy. 24, FAP 443-G, 66,336 cu. yds. rdwy. excav., 13 cu. yds. dry chan. excav., 165 cu. yds. culv. excav. A, 1127 M. gals. sprinkling embankment, 115 hrs. rolling embankment, 34,755 cu. yds. borrow, 425,734 sta. yds. overhaul, 81,65 cu. yds. class A conc., 6894 lbs. rein. steel, 208 lin. ft. corr. galv. metal pipe (24 in.);

Reeves and Culberson—13.898 mi. grading and drainage structures, Hwy. 17, FAP 607-C and E, 111,605 cu. yds. rdwy. excav., 2605 cu. yds. caliche rock rdwy. excav., 1398 cu. yds. solid rock rdwy. excav., 9703 cu. yds. dry chan. excav., 1200 cu. yds. culv. excav. A, 347 hrs. blading embankment, 5,926 cu. yds. borrow, 14,358 sta. yds. overhaul, 1225 cu. yds. class A conc., 125,401 lbs. rein. steel, 684 lin. ft. conc. railing, 2 cattle guards, 154 R/W markers;

McLennan—14.484 mi. conc. pavement, Hwy. 2, SP 996-A and FAP 614-A Unit II, 27,749 cu. yds. rdwy. excav., 442 cu. yds. dry chan. excav., 250 M. gals. jetting and ponding, 10,000 cu. y. stripping material pits, 13,275 sta. yds. overhaul, 16,455 qtr. mi. yds. overhaul, 362,255 sq. yds. fine grd. subgrade and shldr., 1196 cu. y. stan. gravel surface course, 62,906 cu. y. subgr. treatment A, 25,336 cu. yds. subgr. treatment B, 409,735 cu. yd. material hauled addl. qtr. mi., 200 hrs. extra rolling subgr. treatment A, 171-381 sq. yd. conc. pavement, W.C.R. 9-6-9-in., 4155 sq. yd. conc. pavement, W.C.R., 7-7-9-in., 500,153 lbs. rein. steel for pavements, 626 lin. ft. monolithic conc. curb, 1808 lin. ft. flexible steel plate guard fence;

Brewster—8.307 mi. grading and drainage structures, Hwy. 3, SP 862-E, 4.43 acres clearing and grubbing, 82,393 cu. yds. rdwy. excav., 13,822 cu. yds. solid rock excav., 7500 cu. yds. dry chan. excav., 1057 cu. yds. culv. excav. A, 150 cu. yds. culv. excav. B, 293 hrs. blading embankment, 4125 cu. yds. borrow, 135,741 sta. yds. overhaul, 3012 sq. yds. fine gr. subgrade and shldr., 2824 cu. yd. conc. pavement, 1695 lin. ft. conc. curb, 7551 lbs. rein. steel for pavements, 1201 cu. yds. class A conc., 149,850 lbs. rein. steel,

2300 lbs. struc. steel, 18.4 cu. yds. dry rubble masonry, 40 cu. yd. dry riprap, class 1, 50 cu. yds. grouted riprap, 350 lin. ft. 24-in., 64 lin. ft. 30-in., 72 lin. ft. 36-in. corr. galv. metal pipe; 160 R/W markers;

Calhoun—10.821 mi. grading and small drainage structures, Hwy. 57, SP 807-D, 1.03 acres clearing and grubbing, 123,400 cu. yds. rdwy. excav., 13,181 cu. yds. dry chan. excav., 408 cu. yds. culv. excav. A, 178 hrs. blading embankment, 1258 M. gals. jetting and ponding, 14,454 cu. yds. borrow, 64,426 sta. yds. overhaul, 11,519 qtr. mi. yds. overhaul, 221 cu. yd. class A conc. for culv., 18,515 lbs. rein. steel, 206 R/W markers;

Cherokee—7.308 mi. triple asphalt surface treatment and iron ore top soil shoulders, 4777 cu. yd. aggregate for surface treatment, 94,585 gal. asphalt, 4244 cu. yds. iron ore top soil shldr., 23,503 cu. yds. material hauled addl. qtr. mi., 14,840 lin. ft. wire cable guard fence;

Coke—13.528 mi. grading and small drainage structures, Hwy. 70, SP 439-D, 64.86 acres clearing and grubbing, 110,303 cu. yds. rdwy. excav., 2867 cu. yds. solid rock excav., 26,804 cu. yds. dry chan. excav., 678 hrs. blading embankment, 4095 M. gals. jetting and ponding, 49,898 cu. yds. borrow, 132,954 sta. yds. overhaul, 68,744 qtr. mi. yds. overhaul, 442 cu. yds. struc. excav. (culv.), 462 cu. yds. class A conc. for culv., 50,324 lbs. rein. steel, 64 cu. yds. grouted riprap, 94 R/W markers;

Dallas—1.336 mi. special gravel surface courses, Hwy. 121, SP 774-D, Unit II, 1 acre clearing and grubbing, 3000 cu. yd. stripping material pits, 28,228 sq. yd. fine gr. subgr. and shldr., 3829 cu. yd. spec. gravel surface first course, 2549 cu. yd. spec. gravel, second course, 26,757 cu. yd. material hauled addl. qtr. mile, 150 hrs. extra rolling subgr. and surface courses, 191,385 M. gals. sprinkling subgr. and surface courses, 87,733 M. gals. water hauled addl. mi., 96 shoulder drains, 432 lin. ft. wire mesh guard fence;

Goliad—16.825 mi. caliche base courses, Hwy. 119, SP 835-A and D, Unit II, 9.5 acres clearing and grubbing, 10,387 cu. yds. excav., 135 cu. yds. dry chan. excav., 243 cu. yds. culv. excav. A, 15,200 cu. yds. stripping material pits, 289,255 sq. yds. fine gr. subgr. and shldr., 2680 M. gals. sprinkling subgr. and base courses, 1903 M. gals. water hauled addl. mi., 78,729 cu. yds. caliche base courses, 459,215 cu. yds. material hauled addl. qtr. mile, 3066 M. gals. jetting and ponding, 500 ft. drilling wells, 86.02 cu. yds. class A conc., 7486 lbs. rein. steel, 278 R/W markers.

TEXAS—State Highway Comsn., Gibb Gilchrist, Engr., Austin, plans projects in following counties:

Bowie—6 mi. conc. Hwy. 1, Maud extending west to Carbondale; bituminous treatment and widening Hwy. 1, Carbondale to Simms.

Cass—5 mi. 9-ft. slab conc. Hwy. 47, Atlanta west.

Tex. Gonzales—Gonzales County Road Dist. 1 voted \$350,000 bonds for roads; \$100,000 for lateral roads, and \$250,000 for constructing highways toward Nixon and toward Shiner.

Tex. Marshall—City, H. J. Graeser, City Mgr., opens bids June 21 for 13 blocks of paving in residential sections; \$48,156.

VIRGINIA—State Highway Dept., H. G. Shirley, Commr., Richmond, has survey of relocation of Route 29, between point south of Earlyville, Albemarle county, to Greene county line.

VIRGINIA—Department of Highways, H. G. Shirley, Commr., Richmond, to let contracts at earliest practicable time for projects totaling in value \$1,300,000 in following districts:

Richmond—Route 10, Blackstone to end of present conc. paving, \$15,000; widening of bridge over South Anne River and approaches, Route 420, \$25,000;

Salem—Paving, Route 10, Roanoke to Salem, \$125,000; Route 22, Craig Creek, east to Newcastles, \$18,000;

Bristol—Paving, Route 10, Bristol to Gate City, \$100,000;

Lynchburg—Route 67, Halifax to Chatham, \$25,000; widening Piney Creek and Difficult Run bridges, Route 12, \$7000;

Suffolk—Route 529, Newport News to Lee Hall, \$100,000; bridge at Northwest, Route 27, \$20,000; bridge at Deep Creek, Route 40, \$12,000;

Fredericksburg—Route 611, Garnet's Mill to Potomac Beach, \$25,000; bridge at Tipters Ferry, Route 605, \$80,000;

Staunton—Route 33, Winchester south, \$134,200; Route 33, Staunton north, \$437,000; Route 33, Harrisonburg north, \$170,000.

Culpeper District—various projects, using convict forces.

VIRGINIA—Department of Highways, H. G. Shirley, Commr., Richmond, has low bids for projects in following counties:

Rockbridge—2.26 mi., Route 14, Buena Vista to Lexington, Robert Martin Co., Salem, Va., \$27,630;

Russell and Washington—15 mi., Route 110, Holston River toward Russell county line, R. H. Bolling, Norton, Va., \$47,951;

Nottaway—Little Nottaway River bridge, Route 48, R. W. Moore & Co., \$9008;

Halifax—Route 44, intersection with Route 18 to Turbeville post office, C. A. Ragland, Louisville, N. C., \$41,130.

Va., Richmond—City, R. Keith Compton, Director of Public Works, has low bid of \$35,019 from R. G. Lassiter & Co., Page Trust Co. Bldg., Raleigh, N. C., for 17 grading, Halifax, Stockton, Beattie, Moody, Riverside, 26th St. 6-2

Va., Richmond—City, R. Keith Compton, Director of Public Works, opens bids June 14 for vitrified brick paving with 6-in. conc. base, Clay St., Second to Seventh streets; 1030 cu. yd. excav., 4200 sq. yd. pavement.

WEST VIRGINIA—State Road Comsn., Charleston, considering request to pave highway, Athens to Hinton, Mercer county.

Contracts Awarded

FLORIDA—State Road Dept., Tallahassee, let contract to F. A. McKenzie, Lakeland, to grade Road 67, Joe Peoples Hwy., Three Mile canal bridge to Road 25.

Fla., Pensacola—Navy Dept., Bureau of Yard and Docks, Washington, let contract at \$9449 to Smith Engineering and Construction Co., Inc., 1624 Barnett Bldg., Jacksonville, for resurfacing Murray Road, Naval Air Station; Specification 6823. 5-26

Ky., Lexington—City, R. L. Castillo, Purchasing Agent, let contract for 20,000 gal. of road oil to Asland Refining Co., Ashland; for 10,000 gal. heavy oil to Texas Company, Old Frankfort Pike; for 8000 gal. asphalt cut-back to J. Frank Grimes. 5-12

La., Tallulah—Madison Parish Police Jury, P. O. Benjamin, Engr. on Roads, let following contracts: Stockland extension road, labor, J. K. Post, \$2379; Montrose-Fortune Fork road, J. K. Post, labor, \$2464; Lick Bayou extension, labor and material, G. S. Blanche, \$776. 5-12

MISSISSIPPI—State Highway Comsn., Jackson, let contract for project in following county:

Coahoma—12.111 mi. paving, Tutwiler-Clarksdale Road, FAP 212-A, Union Paving Co., Broadway and Stiles St., Philadelphia, Pa., \$200,737.

Lauderdale—155,840 cu. yd. hydraulic settlement of fills, FAP 135-Reop., Moore Rowell Co., Jackson, \$9222.

Mo., St. Louis—Bd. of Public Service let contracts for following paving projects, totaling \$46,292: 20th St., Market to Chestnut, Flinn Paving Co., 1405 S. First St., \$1988; 15th St., Olive to Washington Ave., Asphalt Paving Co., 1328 Sublette St., \$5713; Wells Ave., Kingshighway to Academy Ave., Crean & Scott Construction Co., 1242 Sublette St., \$10,829; Veronica Ave., Kingshighway north-west to Keifer St., Skrainka Construction Co., Security Bldg., \$15,393; Annetta Ave., McLaran Ave. to northern McLaran Hills, Eyermaann Contracting Co., 1210 S. Grand St., \$6476; Partridge Ave., McLaran Ave. to north McLaran Hills, Stiers Brothers Construction Co., 6001 Lindell Blvd., \$5913.

Mo., St. Louis—St. Louis County Court let following contracts: Hanley road, Page Ave. to St. Charles Rock road, to C. A. Moreno Construction Co., Synd. Trust Bldg., \$27,246; Lexington Ave., Arden to Kienlen Ave., Wellston, to Skrainka Construction Co., Security Bldg., \$9620; Beale Ave., Suburban Ave. to Spencer Place, Wellston, to Kunze Construction Co., 3880 Delor St., \$1919.

OKLAHOMA—State Highway Comsn., Oklahoma City, let contracts for projects in following counties:

Comanche—Two bridges near Sterling, D. C. Sampley, \$9032;

Beckham—6.1 mi. grade and drain, Hwy. 34, Carter south, C. E. Mervelt, El Reno, \$20,584; 4.9 mi. grade and drain, Hwy. 34, north from Carter, Stephenson and Boyle, Elk City, \$18,427; 2 bridges, Hwy. 34, north of Carter, Witt and Tatum, Grandfield, \$8332; 2 bridges, same road, R. S. James Engineering Co., Oklahoma City, \$14,601;

Beaver—7.4 mi. grade and drain, U. S. 270, south of Beaver northward, Green & Reese, Fairview, \$23,123; 2 bridges, south of Beaver, U. S. 270, Herman Mervelt, El Reno, \$18,177; 6.6 mi. grade and drain, U. S. 270, Beaver south, S. S. Strong, \$16,511; 2 bridges south of Beaver, S. S. Strong, \$4081;

Washita—underpass, Hwy. 66, Canute, Park & Co., Oklahoma City, \$18,274. 5-26

TEXAS—State Highway Dept., Gibb Gilchrist, Engr., Austin, let contracts for projects in following counties:

Andrews—17.7 mi. triple asphalt surface, Hwy. 137, Ector county to Andrews, Lone Star Construction Co., San Antonio, \$56,611;

Reagan—18.5 mi. caliche and waterbound macadam, Hwy. 99, Upton county to Big Lake, R. W. Higgs, Pharr, \$72,603;

Cherokee—9.2 mi. iron ore top and oil treatment, Hwy. 43, Jacksonville to Rusk county, F. P. McElwath Construction Co., Corsicana, \$28,675;

Gray—14.3 mi. grading and drainage structures and caliche base and bituminous surface treatment, Hwy. 33, Pampa to Roberts county, Cooke and Braden, Marshall, \$113,369;

Pecos—10.9 mi. grading and small drain, struc., Hwy. 27, between Fort Stock and Sheffield, Sanders and Hurlburt, Fort Stockton, \$27,553; Washita river bridges and culverts, Hwy. 27, Sanders and Hurlburt, \$18,642;

Sutton—10.9 mi. grading and small drain, struc., Hwy. 27, Honora west, A. B. Muddock, Dallas, \$48,579; bridges over No Name and Granger creeks and Devil's river, Hwy. 27, Crouch and Noland, Strawn, \$36,507; six multiple box culverts and bridge, Hwy. 27, Sonora west, J. Floyd Malcolm Co., Abilene, \$24,744 10 mi. grading and small drainage structure, Hwy. 27, Sonora west, Tom Archer & Co., Fort Worth, \$41,291;

Falls—Big Creek bridge, Hwy. 6, Thomas and Ratliff, Rogers, \$61,090;

Bexar—1303 ft. Hwy. 81, Salado Creek bridge east, Rogers and Stewart, San Antonio, \$420;

Val Verde—8.5 mi. limestone rock asphalt surface, Hwy. 85, Rodgers and Stewart, \$11,668;

McLennan—13.3 mi. conc., Hwy. 31, Waco to Hill county, Aroole Construction Co., Richland, \$174,669;

Bexar and Guadalupe—Cibola and Salado Creek bridges, Hwy. 3-A, D. F. Jones Construction Co., Pyramid Life Bldg., Little Rock, Ark., \$100,614;

DeWitt—Brushy Creek and relief bridge, Hwy. 72, near Yoakum, Buckner Bros., Cleburne, \$19,414; 2.3 mi. grading and drainage, Hwy. 27, Lavaca county line toward Yoakum, Valley Dredging Co., Bryan, \$13,444;

Reeves and Jeff Davis—12.1 mi. grading and drainage, Hwy. 27, from near intersection of Hwys. 1 and 27 to north of Tayahville, Hannah Construction Co. and Fred and Don Hall, Waco, \$33,749; bridge, Pryor draw and Cherry draw, Hwy. 27, L. D. Parks, 4108 Bunting St., Fort Worth, \$26,706;

Presidio—13.3 mi. grading and drainage, Hwy. 17, Ocha road to Presidio, Thurber Construction Co., Fort Worth Bank Bldg., Fort Worth, \$42,396;

Hudspeth—7.1 mi. grading and drainage, Hwy. 1, Lasca to Sierra Blanca, Hannah Construction Co. and Fred and Don Hall, Waco, \$26,608.

TEXAS—State Highway Dept., Gibb Gilchrist, Engr., Austin, let contracts for projects in following counties:

Tarrant—2.9 mi. conc. paving, Hwy. 121, west of Grapevine to Dallas county, West Texas Construction Co., 501 E. Rosedale St., Fort Worth, \$40,515.

Leon—11.9 mi. conc. paving, Hy. 43, southwest of T. & B. V. R. to Navasota, G. L. Laboiteaux, Bryan, \$164,679.

Roberts—14.1 mi. conc. paving, Hwy. 33, Gray county to Hemphill county, L. E. Witham & Co., Wichita Falls, \$221,425.

Childress—14.3 mi. conc. paving, Childress to Hardeman county, Kirkland loop, paving approaches to overpass, Hwy. 5 and underpass, Hwy. 4, McClung Construction Co., Inc., 1st Natl. Bank Bldg., Fort Worth, \$232,239; 12.2 mi. grading and drainage structures, Hwy. 4, Prairie Dog Town fork to Collingsworth county, Hudleston & Work, Crosbyton, Tex., \$63,382.

McLennan—Harris Creek bridge and culverts, Hwy. 7, near McGregor, Ed Pettus, Montgomery, Ala.; 1.4 mi. grading and small drainage structures, Hwy. 7, Coryell county northeast of McGregor, Word & Worrell, Itasca, Tex., \$41,477.

Mculloch—San Saba River bridge, Hwy. 9, Combs & Glade, Wichita Falls, \$52,982.

Shelby—Tenaha Bayou bridge, Hwy. 8, J. M. Odom, Austin, \$120,000.

Stonewall—17.6 mi. grading and drainage structures, Hwy. 4, Aspermont to King county line, Womack-Henning Construction Co., Sherman, \$63,424.

Tex. Fort Sam Houston—Rodgers & Stewart, 1407 W. Laurel St., San Antonio, have contract for 10,000 sq. yds. resurfacing, general depot, Eighth Corps area.

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Maxwell Field—See Want Section—Bids Asked.

Ga., Atlanta—City construct 2 sections of lateral sewers, Wilbur St. and Tucker Ave.; W. Paul Carpenter, Chrmn. Sewer Committee.

La., New Orleans—H. A. Forrest, 6319 Catina St., low bidder for Contr. 113-S, sub-mains and lateral sewers in Washington Ave., Palmetto, Pine, etc. 5-26

Md., Baltimore—Marocco Construction Co., 231 S. Exeter St., has contract at \$24,469, for sewers, Storm Water Contr. 176. 6-2

N. C., Asheville—Bd. of Public Safety and Public Works, Gerald Cowan, Director, install storm sewer extending from corner Haywood St. to intersection of Coxe and Patton Ave.

Okla., Oklahoma City—City construct storm and sanitary sewers on Santa Fe right of way; will build by day labor. Following have contracts for material: Shearman Concrete Pipe Co., 2365 E. 10th St.; Makins Sand & Gravel Co., Com. Exch. Bldg.; Capitol Steel & Iron Co., 1726 S. Agnew St.; J. B. Klein Iron & Foundry Co., 1004 W. 2nd St.; E. & B. Machine & Iron Works, 801 S. Bdw.; Kiowa Lumber Co., 907 S. E. 29th St. all Oklahoma City, and W. S. Dickey Clay Mfg. Co., N. Y. Life Bldg., Kansas City, Mo.

S. C., Columbia—See Building News Proposed—Hospitals, Sanatoriums, Etc.

Tex., San Antonio—W. A. Wurzbach, County Judge, reported, interested in creation of an improvement district in Olmos Park Estates and constructing sewage disposal plant; W. S. Goodman, County Engr.

Va., Richmond—Dept. of Public Works, R. Keith Compton, Director, opens bids June 13 for combined sanitary and storm sewer in 31st, 39th, 38th and McRae Sts.; cost \$10,000.

Telephones and Radio

Ark., Prescott—Lon J. Jester, receiver for Midwest States Utilities Co., owners of local telephone company, has 25-yr. telephone franchise.

D. C., Washington—Bd. of Directors of Chesapeake & Potomac Telephone Co., approved additional construction work involving \$195,000; work includes extension of underground cable to provide additional trunk lines between North-Potomac-Decatur and Columbia central offices and installing booster equipment to provide transmission on existing underground circuits connecting Metropolitan, North, Columbia and Georgia offices, etc.; John A. Remon, Gen. Mgr.

Ga., LaGrange—Allen Wright Marshall, Jr., and Allen Wright Marshall, Sr., applied to Federal Radio Comsn. for permission to move studio to new location.

Md., Hagerstown—Federal Radio Comsn. approved application of A. V. Tidmore to establish radio station; operate on frequency of 1210 kilocycles with 100 watts; cost \$12,000.

Okla., Norman—WNAD, University of Oklahoma, applied to Federal Radio Comsn. for permission to install automatic frequency control.

Va., Petersburg—WLBG, Inc., Chas. H. Goodman, Pres., 126-A N. Sycamore St., installing equipment including crystal control and monitor for radio broadcasting station Ettrick; contract let to Piezo Electric Co., and R. C. A. Victor Co., New York. 6-3

Textile Mills

Ala., Huntsville—West Huntsville Cotton Mills Co., W. A. Stanley, Mgr., advises took over machinery and stock of Seidman Braid & Fabric Corp.; do not contemplate any improvements. 6-2

Ga., Rome—See Water Works.

N. C., Denton—Rogers Hosiery Mills, Inc., chartered; J. G. Rogers, N. Val Johnson.

N. C., Stanley—Lola Mills, Inc., capital \$50,000, incorporated; R. N. Aycock, Gastonia; John M. Scott, 1522 S. Tryon St., Charlotte.

N. C., Tuxedo—State Planters Bank & Trust Co., B. Frank Dew, V. P., Richmond, Va., advises May 30 court confirmed sale of property of Green River Mfg. Co. to the bank and E. W. Montgomery & Co., Greenville, S. C.; will continue operation of mill. form new corporation. 4-4

S. C., Lancaster—Robert & Co., Inc., Archts. and Engrs., Atlanta, Ga., advise in regard to building addition for Lancaster Cotton Mills; plans and specifications completed some time ago and construction well under way; work being handled by owners; building will consist of 4 story connection between No. 1 and No. 2 mills, approximately 100x125 ft. each floor; of slow burning, mill type construction, maple top floors over waterproof felt, c. i. columns, some salvaged wood windows reused, new windows steel, and five-ply pitch, felt and gravel roof; Robert & Co. placed following contracts: Struc. steel, Carolina Steel & Iron Co., Greensboro, N. C., through Atlanta office; misc. iron, Austin Bros. Bridge Co., 1195 Mickelberry St., Atlanta; steel windows, J. S. Thorn Co., through Southern G. F. Company, 263 Decatur St., S. E., Atlanta; rein. steel, Southern G. F. Co.; c. i. columns, Paul Wright & Co., Birmingham, Ala.; fire doors, The Kinnear Mfg. Co., Columbus, O.; through Hoffman & Amick, Atlanta. 6-2

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that Classification.

Ala., Maxwell Field—See Want Section—Bids Asked.

Ark., Fort Smith—W. H. Vaughn, Commrs., Water Works System, recommended expenditure of \$131,000 for repair and modernizing water works; program would include covers to storage bins, \$80,000; water main cleaning, \$15,000; mixing or dosing chambers, \$800; repairs to floors of storage basins, \$8000; 8 sets of control apparatus for rapid sand filters, \$6000; rebuilding boiler setting, \$8500; additional pump at sewer station, \$300, etc.

Ga., Rome—Tubize Chatillon Corp., 2 Park Ave., New York City, reported, let contract to Ledbetter & Johnson, to construct additional reservoir, 100x200 ft.; capacity of 1,250,000 gal.

Ga., Savannah Beach—Henry M. Buckley, Clk., advises data being compiled toward ascertaining cost of water works system and method of financing. 6-2

La., New Orleans—Sewerage and Water Bd. receives bids June 13 to furnish 75 h. p. motor.

Mo., St. Louis—St. Louis County Water Co., reported, placed contract with McClintic-Marshall Corp., Pittsburgh, Pa., for quantity of 36-in. steel pipe for water mains; cost about \$46,900. 5-5

S. C., Greenwood—Fiske-Carter Construction Co., Spartanburg, low bidder at \$15,000, for constructing water works unit; conc., struc. steel, c. i. columns, asbestos roof; Wiedeman & Singleton, Engrs., Candler Bldg., Atlanta, Ga. 5-26

Va., Quantico—See Want Section—Bids Asked.

Woodworking Plants

Ala., Montgomery—Montgomery Stave & Cooperage Co., reported, re-constructing plant N. McDonough St.; install machinery; cost \$74,000.

Ga., Dublin—J. J. Deacon Co., James E. Allen, Pres., will incorporate company under name of Georgia Plywood Co., with W. J. Loveless, Jr., Mgr.; operate veneer mill.

Miss., Lake—Schneider Stave Co. erect plant for manufacture slack staves for barrels; Q. A. Lowe, Resident Mgr.

FIRE DAMAGE

Ala., Leeds—J. D. Watkins Dairy No. 2, six miles from Leeds.

Ark., Marked Tree—Busy Bee Hotel and law office and library of C. T. Carpenter; loss \$50,000.

Ark., Booneville—Residence of Ray Bently on North Broadway.

Ark., Glenwood—Store of Cadoo River Lumber Co.; loss \$25,000.

Ga., Thomasville—Fletcherville school building; loss \$75,000.

Ky., Owingsville—Brick business building known as Elliott Bldg., owned by Tim Kerns.

Ky., Louisville—Plant of Kentucky Macaroni Co., Floyd St., Jos. Viviano, Pres.; loss \$150,000.

La., Alto—Residence of M. R. Hemler, 1 mi. east of Alto; loss \$10,000.

La., Cedar Grove, Shreveport—Plant of Allen Mfg. Co. (Lumber); loss \$60,000.

La., Lake Arthur—Sawmill plant of Home Lumber Co., E. H. Andrus, Mgr.

La., Mandeville—Ozone Bathhouse, owned by Robert Glockner.

Md., Baltimore—Building occupied by National Piano Co. and Louis M. Rosenfeld Co., 322 N. Howard St.; loss \$50,000.

Md., Germantown—Dwelling of John H. Nichols near Germantown.

Md., Hagerstown—Warehouses of C. D. Miller Co., 31 S. Potomac St. and Potomac Edison Co.; loss \$60,000.

Mo., St. Joseph—Country home W. K. James leased by John Courtney, near St. Joseph; loss \$60,000.

N. C., Salisbury—Store of T. M. Kesler Dry Goods Store; loss \$15,000.

Okl., Chickasha—Southern Wholesale

Grocery Store and A. B. C. Flour and Feed Co.; loss \$30,000.

S. C., Orangeburg—Lumber yard of Orangeburg Lumber Co.

Tenn., Chattanooga—Natorium, and Casino of Warner Park and Fair office building; City Commr. J. A. Cash.

Tenn., Chattanooga—Store room of Plymouth Laundry, Cor. First & Market Sts.; loss \$12,000.

Tenn., Memphis—Building of Memphis Compress & Storage Co., Cotton Exch. Bldg.; loss \$100,000.

Tex., Big Springs—Cohoma Gin Co.'s plant.

Tex., Waskom—Shadrack Motor Co.'s building.

Va., Norfolk—Winslow's Pier, foot of Southampton Ave., Atlantic City, owned and operated by Commercial Docks, Inc. J. W. Caster, mgr., 4011 Colonial Ave.

Va., Richmond—Warehouse of David M. Lea & Co., Inc. (woodenware), near Stop 3, Petersburg Pike; loss \$12,000.

Va., Virginia Beach—Cottage at Eighth St. and Atlantic Ave., owned by Isaac Klaff, Law Bldg., Norfolk, Va.; loss \$10,000.

Wetmore, Act. Supvg. Archt., Washington, has low bid from Rohan Co., Inc., Garden City, Long Island, New York, at \$227,800 for U. S. post office. 5-28

Ga., Brunswick—Following prospective bidders, U. S. post office, remodeling and extension, bids open June 14: Noyes, Roach & Co., Beatrice, Neb.; C. E. King, 1009 Westland St., Charlottesville, Va.; Algernon Blair, 1st Natl. Bank Bldg.; Samford Bros., 301 Washington Ave., both Montgomery, Ala.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Earl E. Garber & Co., 203 W. 4th St., Bethlehem, Pa.; George D. Auchter Co., 600 E. Fourth St., Jacksonville, Fla.; Norwood-Griffin Co., Bona Allen Bldg., Atlanta, Ga.; Upchurch Construction Co., Bell Bldg., Montgomery, Ala.; Virginia Engineering Co., First National Bank Bldg., Newport News, Va.; Universal Construction Co., Medical Arts Bldg., Fort Wayne, Ind.; Murphey Pound, Box 422, Columbus, Ga.; Kellogg & Anderson, Lebanon, Mo. 5-26

Ga., Brunswick—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids June 14 for remodeling and enlarging U. S. custom house and post office.

Ky., Louisville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from A. S. Ruslander & Son, 214 Terrace, Buffalo, N. Y., for permanent cafeteria equipment, U. S. post office and courthouse. 11-19

La., Monroe—Treasury Dept., Washington, reported, will receive bids within next 3 weeks for U. S. post office building; est. cost \$390,000; J. W. Smith and Associates, Architects. 11-19

Md., Baltimore—See Want Section—Bids Asked.

Mo., Trenton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens supplemental bids June 14 from original bidders only for construction U. S. post office building. 5-5

N. C., Mount Airy—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, opens bids June 24 for construction U. S. post office. 2-25

Okl., Ada—William T. Schmitt, Archt., Equity Bldg., Oklahoma City, preparing plans for U. S. post office; est. cost \$250,000; brick, stone and conc., 2 stories and basement.

S. C., Cheraw—Following prospective bidders U. S. post office, bids open June 17: C. A. Morrison & Son, Shelby, N. C.; Norwood-Griffin Co., Bona Allen Bldg., Atlanta, Ga. 6-2

S. C., Parris Island—Bureau of Yards and Docks, Navy Dept., Washington, has low bid from Wright & Gowen Co., Brunswick, Ga., at \$8813 for painting building at U. S. Marine Barracks.

Tex., San Angelo—Landis & Young, Austin, Tex., bidding on U. S. post office, bids open June 22. 6-2

Va., Cape Charles—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bid from Samford Bros., Inc., 301 Washington Ave., Montgomery, Ala., at \$53,883. 6-2

Va., Langley Field—U. S. Army, Capt. Geo. H. Schumacher, Construction Quartermaster, has low bid from Smith-Pew Construction Co., 435 Irwin St. N. E., Atlanta, Ga., at \$86,035 for erecting gymnasium and theatre building; 2 and 3 stories and basement, rein. conc., brick, struc. steel, tile, etc. 5-5

Hospitals, Sanitoriums, Etc.

Ark., Fayetteville—Following prospective bidders, Veterans Hospital, bids open June 21:

GENERAL CONSTRUCTION—M. E. Gilloz, Broadway Hotel Bldg., Monett, Mo.; H. B. Olney, 1202 E. Chicago Ave., East Chicago, Ind.; Wm. Peterson, Donaghey Bldg., Little Rock, Ark.; Virginia Engineering Co., First National Bank; National Construction Co., 631 Tower Bldg., Washington, D. C.; Algernon Blair, First National Bank Bldg.; Samford Bros., Inc., 301 Washington Ave., both Montgomery, Ala.; C. G. Kershaw Contracting Co., 514 Martin Bldg., Birmingham, Ala.; James I. Barnes, Springfield, O.; Coath & Goss, 1109 S. State St.; Henry B. Ryan Co., 500 N. Dearborn St.; W. E. O'Neill Construction Co., 2751 Clybourne Ave.; Jas. McHugh Souss, Inc., 6449 S. Park Ave., Chicago, Ill.; Mads Madsen Co., National Bldg., Ring Construction Co., Wesley Temple Bldg., both Minneapolis, Minn.; Dickie Construction Co., Louderman Bldg., St. Louis, Mo.; H. W. Underhill Construction Co., 235 N. Waco Ave., Wichita, Kans.; Swenson Construction Co., Shubert Theater Bldg., Kansas City, Mo.; Rogers & Leventhal, Inc., P. O. Box 173, Chattanooga, Tenn.; Bosboom & Raub, 1716 H St., Washington; Robert E. McKee, 1900 Texas St., El Paso, Tex.; Wm. P. Jungelaus Co., 825

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Okl., Hominy—Odd Fellows Lodge plans erecting 2-story brick lodge building.

Bank and Office

Ala., Montgomery—Ausfeld and Jones, Archts., Shepherd Bldg., for Medical Arts building for Montgomery Memorial Hospital.

Mo., Hannibal—State Highway Dept., Jefferson City, has low bid from M. E. Gilloz, Monett, Mo., at \$64,900 for office building.

Mo., St. Joseph—State Highway Dept., Jefferson City, has low bid from Henry Williams, Marshall, Mo., at \$61,000 for highway division office building. 5-26

Churches

La., Larose—Wm. R. Burk, Archt., Balter Bldg., New Orleans, opens bids June 15 for erecting proposed church building for Holy Roman Catholic Church, Rev. Chas. Tessier, Pastor; 55x110, comb. brick and frame and cast stone trim exterior rein. conc. foundation, masonry and millwork, sheet metal work, glazing, painting, finished hardware, wood floors, electric wiring, paving. Following bidders estimated: Wm. Wallace, Pere Marquette Bldg.; J. A. Haase, Jr., 916 Union St.; H. Pratt Farnsworth, 413 Dauphine St.; Gervais F. Favrot, Balter Bldg., all New Orleans; W. J. Quick, Lake Charles, La.

La., Ville Platte—Sacred Heart Catholic Church plans erecting 1-story and tower steel and hollow tile church building; est. cost \$24,000; Owen J. Southwell, Archt., New Iberia, La.

Md., Baltimore—St. Katherine's Catholic Church, Rev. William Clements, Pastor, 2521 E. Preston St., will take bids this summer for 1-story stone church building; Henry Dagit & Son, Archts., 1329 Race St., Philadelphia, Pa. 3-3

Md., Fulton—St. Paul's Evangelical Lutheran Church, Rev. L. P. Propst, Pastor, plans 1-story and basement church building; stone walls, wood interior, slate roof, wood floors, stone or conc. foundation; est. cost \$15,000; John Freund, Archt., 1307 St. Paul St., Baltimore, Md.

Okl., Oklahoma City—Kelham Ave. Baptist Church, Rev. R. C. Howard, Pastor, 428 N. E. 16th St., plans erecting 2-story Sunday school building.

City and County

La., Oakdale—City plans erecting city hall and jail on Ninth Ave.

Dwellings

D. C., Washington—R. S. Reynolds Hitt, 1706 New Hampshire Ave., N. W., receiving bids for 2½-story brick and limestone residence, 96x74 ft., at Thirty-second and R Sts., N. W.; Wyeth & Sullivan, Archts., 726 Jackson Place, N. W.

Fla., Jacksonville—Jewell R. Richard, has

permit for 2-story frame dwelling, 4729 Astor Ave.

Fla., Miami Beach—Adolph Vetter, 1156 N. W. 21st St., Miami, has permit for residence and garage, 910 Michigan Ave., Lenox Mansions Subdivision; cost \$10,000; rein. conc., conc. block, stucco construction; Frank Wyatt Wood, Archt., Ingraham Bldg., Miami.

Ga., Atlanta—Brevard Williams, Norris Bldg., reported, expects to have plans ready for bids about June 20 for erecting residence on Habershaw Way; conc. foundations, brick walls, stucco, tile roof; Cooper & Cooper, Archts., Forsyth Bldg.

Ga., Covington—First Methodist Episcopal Church, care Robert Fowler, plans erecting parsonage building; 2 stories and basement, 42x30, 8 rooms and 2 baths, conc. foundations, brick and frame walls, Johns-Manville asbestos shingle roof, hardwood and tile floors, steam heating, plumbing, wiring.

Md., Baltimore—William F. Norris, 8 E. Lexington St., plans 2 brick and stucco dwellings and garages, 2 stories.

Md., Baltimore—Hollen Building Co., Inc., plans erecting 2-dwellings with garages, 2318-20 Sulgrave Ave.

Mo., Clayton—R. C. Glenn, Clayton and Kent road, has permit 2-story brick dwelling in Le Hacienda, 2nd addition, St. Louis County.

N. C., Charlotte—Brandon Smith plans erecting home on Briarwood Rd., near Malvern Rd.; Louis Asbury, Archt., 1520 E. 4th St.

Okl., Oklahoma City—W. O. West, 1201 W. 31st St., has permit for brick veneer residence.

N. C., Durham—George W. Carr, Archt., Durham, drawing plans for residence for Mr. Hubert; est. cost \$20,000.

Va., Portsmouth—Mrs. E. D. Curling has permit for 2-family brick veneer residence, 4200 Newport Ave.

Government and State

Ala., Maxwell Field, Montgomery—Construction Quartermaster, Capt. M. A. McFadden, U. S. Army has low bid from Samford Bros., Inc., 301 Washington Ave., Montgomery, for erecting standard magazines, 1 story, 42x26, rein. conc., brick, hollow tile, misc. iron and steel, metal doors, built-up roof. 5-12

D. C., Washington—District Commrs., District Building, has low bid from Industrial Engineering & Construction Co., 1909 Minnesota Ave. S. E., Washington, at \$19,311 for fire stairways for 13 buildings.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, has low bids for Department of Justice building and elevators; General Construction; George A. Fuller Co., 1st St. and Maryland Ave., S.W., Washington, \$7,600,000; elevators—Otis Elevator Co., 810 18th St., N.W., Washington, \$566,000. 5-26

Fla., Palm Beach—Treasury Dept., Jas. A.

door frames, austral windows, comp. roof, Dixie ventilators, U. S. G. Co.'s insulation boards, slate toilet partitions, hardwood, tile and conc. floors, plumbing fixtures by Crane, Kohler or Standard, Halsey Taylor founts; Edwards & Sayward, Archts., 101 Marietta Bldg. Following bidders estimating: J. S. McCaulley Co., Griffin Construction Co., 452 Spring St., N. W.; Barge-Thompson Co., 136 Ellis St., N. E.; Ray M. Lee, 1071 N. Highland Ave., N.E.; Southern Ferro Concrete Co., Atlanta Tr. Co. Bldg.; Norwood-Griffin Co., Bona Allen Bldg.; Smith-Pew Construction Co., 435 Irwin St., N. E.; Capitol Construction Co., Standard Bldg.; Brazell, Miller & Newbanks, Inc., Norris Bldg.; G. P. Donnellan, 32 Peachtree Way, all Atlanta. 4-14

La., Lake Charles—See Want Section—Bids Asked.

La., New Orleans—Tulane University, Chauncey French, Chmn., reported, will have plans ready for distribution about July 2 for gymnasium building; est. cost \$140,000, 1 story and basement, 160x200, rein. conc., brick, hollow tile, struc. steel; Armstrong & Koch, Archts., Audobon Bldg., New Orleans. 3-25

Md., Baltimore—See Want Section—Bids Asked—Painting.

Md., Baltimore—City of Baltimore, Public Improvement Comsn., H. J. Leimbach, Engr., City Hall, opens bids June 15 for painting all plastered walls and ceilings and conc. surfaces in following school groups: Group No. 1, Glenmount, Brehms Lane, Gardenville (add.), Govans, Roland Park (add.); Group No. 2, Arlington, Violetville, No. 84 (add.), Johnson & Heath Sts., No. 220 (add.), Washington Rd. and Spence St., No. 34 (add.), Washington Blvd. and Carey St., Lyndhurst No. 113 (add.), Federal and Carter Sts. Schools; Group No. 3, No. 63 at 26th and St. Paul Sts., Administration Bldg., 3 E. 25th St., No. 20 (add.), Federal and Eden Sts., East Baltimore Colored Jr. High School.

Miss., Jackson—Claude H. Lindsley, Archt., Tower Bldg., Jackson, will have plans ready for bids early in June for rebuilding of Pearl Consolidated School building on Highway No. 80 just east of Jackson in Rankin County; est. cost \$18,000; 100x102, brick building with built-up roof, plumbing, gas heating, electric wiring. F. M. Lowther, Brandon, Miss., County Supt. of Education.

Okla., Blackwell—City plans building school recently destroyed by fire; voted \$25,000 bond issue.

Tenn., Jonesboro—Washington County Bd. of Education, R. B. Clark, Sec., opens bids June 14 for erecting Lamar High School building; separate proposals received for general construction and for plumbing and heating; plans from Colle & Cardwell, Archts., Johnson City, Tenn.

Tex., Austin—University of Texas, Board of Regents, reported, voted authorization of bids for construction of additional power plant for main University. 5-12

Tex., Houston—Goose Creek Southern Bible College, Rev. J. T. Little, Pres., reported, will erect \$25,000 brick veneer dormitory to house 200 students.

Tex., Rusk—Rusk Independent School Dist., Cherokee College, plans building school; voted \$75,000 bond issue.

Va., Denbigh—Warwick County School Bd., B. L. Poindexter, Chrmn., Morrison, Va., opens bids June 8 for erecting public school building at Denbigh; plans from Raymond V. Long's office, Director School Buildings, Dept. of Education, Richmond, Va.

W. Va., Salem—Carleton C. Wood, Archt., Lowndes Bldg., Clarksburg, selected as architect for new gymnasium for Salem College, to replace one destroyed by fire.

Stores

D. C., Washington—See Hotels and Apartments.

Ga., Atlanta—Crawford Drug Co., 122 Forsyth St., N. W., reported, will remodel store building at 162 Peachtree St. N. E.

Tex., Dallas—R. H. Gamble, Realtor, Kirby Bldg., reported, will erect brick store building at Thomas and Washington Sts.; cost \$10,000.

Tex., San Antonio—N. S. Dickinson, 230 Donaldson St., reported, will erect another unit in the Thomas Jefferson Community Center; Piggly-Wiggly Stores to occupy part of building; Nel-Stone and concrete with stucco exterior; Adams & Adams, Archts., Western Natl. Bldg.

BUILDING CONTRACTS AWARDED

Association and Fraternal

La., New Orleans—Charles A. Ahern, Grand Knight, New Orleans, Council No. 714, Knights of Columbus, reported, announced construction will start on projected Cristoforo hotel and fraternal building; George E. Barling, Inc., Archt., Paul Brown Bldg., St. Louis, Mo.; John Keeley, Jr., 4114 State St., East St. Louis, Ill., Gen. Contr. 3-17

Okla., Oklahoma City—W. O. West, 1201 W. 31st St., start work at once on \$10,000, 4-apartment building; 2-story and basement, brick veneer; Russell C. Ray, Archt.

Bank and Office

Md., Baltimore—Carroll-Independent Coal Co., 750 E. 25th St., let contract to J. A. Payne, 3429 Guilford Terrace, for brick, 2-story office building.

Churches

N. C., Winston-Salem—Memorial Presbyterian Church, R. C. Norelet, Chmn., let contract to C. C. Culler, Stockton Bldg., at \$60,000 to erect Sunday School building; 2-stories and basement, 85x45, rein. conc., brick walls, limestone trim, comp. and slate roof; Northrup & O'Brien, Archts.

Va., Hopewell—St. John's Episcopal Church, will start construction immediately on \$12,000 parish house; C. E. Hughes, Contr.

City and County

S. C., Charleston—Charleston County Jail Comsn. let contract to Simons-Mayrant Co. to erect addition to jail building.

Tex., Longview—C. L. Lambie & Co., Amarillo, has contract to erect Nicholson Memorial Public Library, cost \$25,000; Joe L. Grimes, has electrical contract; M. J. Burandt, plumbing work, both Longview, Tex.; Romanesque architecture. 4-28

Dwellings

D. C., Washington—Biron Bros. have permits for five 2-story brick dwellings, 6301 Fourteenth St. N. W. and 1385-91 Sheridan St. N. W.; cost \$27,500.

D. C., Washington—J. A. Kay, 2373 Champlain St. N. W., has permit for two 2-story stucco and cinder block dwellings at 1616 and 1620 Van Buren St. N. W.; cost \$19,000.

D. C., Washington—W. C. & A. N. Miller, 4929 Rockwood Pkwy. N. W., has permit for 2-story stone, brick and frame residence at 4959 Hillbrook Lane; cost \$18,700; and for 2-story stone, brick and frame residence, 3633 Forty-nine St. N. W.; cost \$13,500.

D. C., Washington—W. Carlton Eacho, 5027 41st St. N. W., applied for permit for \$22,000 brick dwelling, 2½-stories, containing 12 rooms at 1900 Plymouth St. N. W.; Elmer Cappelman, Archt., 110 N. Seventh St., Richmond, Va.; Edson W. Briggs Co., Bldrs., 1001 15th St. N. W.

D. C., Washington—Harvard Terrace Development Corp., has permit for twenty 2-story brick dwellings, 3235-3209 Walbridge place, N. W., and 1937-37 Lamont St., N. W.; est. cost \$100,000.

Fla., Miami Beach—Harborn Construction Co. has permit for residence at 1750 Lenox Ave.; Lester Avery, Archt.

Fla., Miami Beach—Gate City Sash & Door Co., Ft. Lauderdale, Fla., has contract for all millwork for residence for Warren Wright, 5255 Collins Ave.; Marine L. Hampton, Archt., 2939 Indian Creek Drive; R. W. Edholm, Inc., 825 Lincoln Rd., Gen. Contr. 6-2

Fla., Miami Beach—Following subcontracts let on residence for Warren Wright, 5255 Collins Ave.: Tile work, Florida Granite and Marble Co., 1527 N. Miami Ave.; building supplies, I. E. Schilling Co., 125 N. E. 6th St., both Miami; lumber, Miami Beach Lumber Co., 1780 Purdy Ave., Miami Beach; Martin L. Hampton, Archt., 2939 Indian Creek Drive; R. W. Edholm, Inc., 825 Lincoln Rd., Gen. Contr. 6-2

Md., Baltimore—Mervis Construction Co., 1650 E. Fayette St., has contract for alterations to residence and garage, Fremont and Mosher Sts.; Harry Oshiey, lessee.

Miss., Newton—Walter Spiva let contract to Currie & Corley, Contrs., Raleigh, Miss., for frame residence; Hull & Malvaney, Archts., Merchants Bk. Bldg., Jackson, Miss.

Mo., St. Louis—A. Putnam, 2711 Sutton St., Maplewood, has permit 2-story dwelling, 3911 Maplewood Place; cost \$10,000; Raumsen Realty and Construction Co., Bldr., 2712 Sutton, Maplewood.

Okla., Tulsa—Chas. E. McCune, Atlas Life Bldg., let contract to John Wiggins, for

2-stories and basement residence, brick veneer; work to start at once.

Government and State

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., let contract to Great Lakes Construction Co., 333 N. Michigan Ave., Chicago, Ill., for Interstate Commerce Commission, Government Auditorium and Department of Labor building at \$8,846,000.

D. C., Washington—Fort Pitt Bridge Works, Oliver Bldg., Pittsburgh, Pa., has contract for structural shapes for Department of Agriculture Extensible building; Aronberg-Fried Co., 155 E. 44th St., New York, Gen. Contr. 5-26

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, let contract to McCloskey & Co., Inc., 1620 W. Thompson St., Philadelphia, Pa., at \$7,642,000 for U. S. Post Office Department building; Delano & Aldrich, Archts., 126 E. 38th St., New York.

Fla., Miami—Metz Mfg. Co., Dubuque, Iowa, has millwork contract for U. S. post office; Ralph Sollitt & Sons Construction Co., 1352 Builders Bldg., Chicago, Ill., Gen. Contr. 4-28

Tex., Galveston—Following sub-contracts let for U. S. Immigration and Detention Station: Creosoted piles, International Creosoting & Construction Co., 2205½ B St., Galveston; rein. steel, Truscon Steel Co., Youngstown, O.; cut stone, Fluck Cut Stone Co., Bloomington, Ind.; struc. steel, Petroleum Iron Works, Petroleum Bldg., Houston, Tex.; orna. and misc. iron, Gand & Earp, Inc., Decatur, Ill. James McHugh Sons, Gen. Contr., 840 W. 70th St., Chicago, Ill.

Hospitals, Sanitoriums, Etc.

Fla., Miami—Gaffney Construction Co., 933 Lincoln Rd., Miami, reported, has contract for 4-story hospital to be known as Catherine Henry Hospital; cost \$150,000; Gerald A. Barry, Archt., Miami Beach and Oak Park, Ill.

Ky., Louisville—Duffin Iron Co., 37 W. Van Buren St., Chicago, Ill., has contract for 200 tons struc. shapes for U. S. Marine Hospital; Hanson Bros. Co., 127 N. Dearborn St., Chicago, Ill., Gen. Contr. 5-5

Md., Baltimore—Following sub-contracts let, City Hospital: Granite, Oliver C. Putney, Arbutus, Md.; limestone, Swenson Limestone Co., Bloomington, Ind.; rep., Chas. A. Weiller, Lexington Bldg.; Palmer & Lamden, Archts., 513 N. Charles St.; Van Rensselaer Saxe, 217 N. Calvert St., Struc. Engrs.; Reeder, Eisner & Aikens, 916 N. Charles St., Mech. Engrs.; J. Henry Miller, 405 W. Franklin St., Gen. Contr. 6-2

Md., Crownsville, Waterbury—Following sub-contracts let on Crownsville State Hospital: Struc. steel, Dietrick Bros., 220 E. Pleasant St.; elevator fronts, United Metal Products Co., Baltimore Life Bldg.; plumbing and heating, Hughes Engineering and Construction Corp., 10 E. 21st St., all Baltimore, Md.; brick work, Feldmeyer & Son, Annapolis, Md.; misc. and orn. iron, Polk Manufacturing Co., Mercersburg, Pa.; cut stone, Ingalls Stone Co., Bedford, Ind.; North-Eastern Construction Co., Gen. Contr., 6 W. Madison St., Baltimore. 5-26

Miscellaneous

Tex., Victoria—Gilbert Falbo has general contract for Art Gallery and Library; Martin Wright Electric Co., 1001 Navarro St., has electrical contract and West & Gutzeit, 431 S. St. Marys St., has plumbing and heating contract, all San Antonio; Allee B. & Robert M. Ayres, Archts., Smith-Young Tower, San Antonio. 5-19

Schools

Ga., Atlanta—Fulton County Bd. of Education, Jere Wells, Supt., Courthouse, Atlanta, let contracts on following schools:

North Fulton High School—General construction, Southern Ferro Concrete Co., 70 Ellis St. N. E., Atlanta, \$105,580; heating, Buckhead Plumbing & Heating Co., 3051 Peachtree Rd. N. E., Atlanta, \$15,885; wiring, J. M. Clayton, 78 Simpson St. S. W., Atlanta; 3 stories, 272x82, rein. conc., brick, hollow tile, struc. steel, copper, tar and gravel and slate roof; Adler & Shutze, Archts., 1330 Candler Bldg., Atlanta.

Bolton School—General construction, E. H. Turnipseed, 345 Tenth St. N. W., Atlanta, \$22,585; heating, Northside Plumbing Co., 118 10th St. Atlanta, \$4060; Daniell & Beutell, Archts., 701 Georgia Savings Bank Bldg., Atlanta. 5-26

Ga., Dalton—City, Frank Manley, Chmn.,

let contract to Barrett Construction Co., Dalton, at \$31,740 for erecting City Park school building; 1 story and basement, conc. foundations, hollow tile and brick walls, Johns-Manville, asbestos roof, struc. steel for auditorium portion, wood ceiling, hardwood floors, plaster and millwork, steam heating, plumbing and wiring; Daniell & Beutell, Archts., 701 Georgia Savings Bank Bldg., Atlanta, Archts. 5-26

La., New Orleans—Southern Steel Works Co., 908 2nd Ct. W., Birmingham, Ala., has contract for 100 tons struc. shapes for buildings at Loyola University.

La., New Orleans—Following sub-contracts let for parochial school for Most Holy Name of Jesus Roman Catholic Church on Cromwell Place between Calhoun St. and Loyola University: rein. steel, Harold Raymond, 8219 Hickory St.; limestone, Walker Bros., Cutstone Co., Bloomington, Ind.; Rathbone DeBuss, Archt., Hibernia Bank Bldg., Lionel F. Favret, Contr., 937 Gravier St., both New Orleans. 4-21

Md., Annapolis—Anne Arundel County School Comms., Geo. Fox, Sec., Annapolis, let contract to Louis Zang, Galesville, Md., at \$9,354 for grade school addition at Owensville, Md.; 2-classrooms, assembly hall in basement, new heating and toilets; W. H. Emory, Jr., Baltimore Trust Bldg., Buckler & Fenhagen, 325 N. Charles St., Asso. Archts., both Baltimore, Md. 6-2

Md., Montrose—Montrose School for Girls, Clarence Tuck, Fidelity Bldg., Baltimore, let contract to North Eastern Construction Co., 6 W. Madison St., Baltimore, for 2-story stone building; Smith & May, Archts., Baltimore Trust Bldg., Baltimore. 5-19

Miss., Ellisville—Bd. of Trustees, Ellisville Public Schools, Wofford Collins, Pres., let contract to L. E. & W. F. Ireland, Contrs., New Augusta, Miss., at \$13,400 for general construction for 1-story brick school building; plumbing and heating, S. S. Richard, 1340 Hazel St., Jackson, Miss., \$2995; electrical contract, R. F. Lawrence, Ellisville; E. C. Hearson & Sons, Hattiesburg, Archts. 5-19

N. C., Raleigh—North Carolina State College, Dr. E. C. Brooks, Pres., let contract to C. York Construction Co., Odd Fellows Bldg., Raleigh, at \$9500 to restore dairy barn recently destroyed by fire at experimental station farm at college.

Okla., Tulsa—Bd. of Education, Mr. McGowan, Member, 410 S. Cincinnati St., reported, will have plans ready about June 10 for Carver School addition; est. cost \$20,000, brick and conc. fireproof, 1-story and basement, cafeteria; A. J. Love & Co., Archts., Atco Bldg. 5-19

Tex., Floydada—Floyd County Bd. of School Trustees let contract to W. S. Moss, Lubbock, Tex., for 4-room school in Lakeview District; S. B. Haynes, Archt., Lubbock.

Tex., Mineral—City let contract to W. W. Brown, 1718 W. Gramercy St., San Antonio, for grade school building, including wiring, 1-story, brick and rein. conc., 4 classrooms and auditorium; Olin Boese and Thomas Thompson, Archts., Builders Exchange Bldg., San Antonio; Terrell Bartlett Engrs., Inc., Smith-Young Tower, San Antonio.

Stores

D. C., Washington—Walter F. Brownley Estate has permit for brick, limestone, conc. and steel store building, S. W. corner Thirtieth and F Sts. N. W.; cost \$75,000; Davis Wick, Rosengarten & Co., Inc., Bldrs., 1406 G St. N. W.; Porter & Lockie, Archts., 2 Dupont Circle N. W.

Ga., Rome—May Realty Co., let contract to Chas. Blackstock, Rome, for alterations and additions to store building to be occupied by Owens Hardware Co.; 2-stories and basement, 51x100, conc. foundations, brick walls, struc. steel, Johns-Manville built-up roof, Easy Set show windows; Otis Clay Poundson, Archt., Marietta Bldg., Atlanta.

Ga., Rome—May Realty Co., Isaac May and Sam Kuttner, let contract to Charles Blackstock to remodel building occupied by Owens Hardware Co. on Broad St.; est. cost \$10,000.

Md., Laurel—William E. Gilbert, Relay, Md., let contract to C. Ernest Nichols, Laurel, to erect brick store building to be occupied by American Stores Co., 2120 W. Lafayette Ave., Baltimore; William F. Stone, Jr., Archt., 2612 N. Charles St., Baltimore, Md.

Mo., St. Louis—Ben Yatkeman, 2724 Franklin St., has permit for alterations and additions to 1-story store building, 2612-14 Franklin St.; Benj. Shapiro, Archt., Walwright Bldg.; S. G. London, Bldr., 2144 Railway Exchange Bldg.

Tex., Lubbock—Milton and Heard Jones let contract for 1-story brick and tile building 1018-20 Broadway to W. G. McMillan, Contr., at approximately \$13,000; S. B. Haynes, Archt.

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THE CLASSIFICATIONS IN THIS SECTION ARE:

WANT
SECTION

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Machinery and Supplies

Blue Printing Machine.—W. M. Smith & Co. (Mchy. Dealer), Birmingham, Ala.—Wants prices on one 48-in. or 54-in. second-hand blue printing machine.

Cigarette Machines.—Moultrie Chamber of Commerce, S. A. Harris, Sec., Moultrie, Ga.—Wants prices on second-hand cigarette machines.

Engine (Steam).—See Generator Set.

Gasoline Power Unit.—R. P. Johnson, General Machinery, Wytheville, Va.—Wants dealers' price on 75 to 100 h. p. stationary gasoline power unit with friction clutch pulley, first-class used condition.

Generator Set.—Lawrence Manning, 185 17th St., N. E., Atlanta, Ga.—Wants prices on 250 kw. Uniflow engine driven alternating current low voltage, 2 phase generating unit Skinner preferred.

Motors.—W. M. Smith & Co., Birmingham, Ala.—Wants to represent manufacturers of electric motors.

Guyana Machine Shops, Inc., Logan, W. Va.—Wants prices on following:

D. C. Motor.—500 volt, 25 to 50 h. p., not over 1200 rpm.

A. C. Motors.—GE 7½ h. p., 1200 RPM, 220 volt, 3 phase, 60 cycle, without compensators

Air Compressor.—belt driven or motor driven, 50 cu. ft.

Hoist.—200 h. p. or larger for handling 1000 ft. of 1 in. rope at 1000 ft. per minute

Riveting Hammer.—Boyer 60.

Nixon-Hasselle Co., Inc., Carter at 13th St., Chattanooga, Tenn.—Wants prices on following:

Mine Hoist.—250 to 300 h. p. capacity 3000 ft. of rope, together with 2300 volt, 3-phase, 60-cycle, alternating current motor

Jaw Crushers.—12x24 and 12x36 jaw crushers, force feed type preferred.

W. M. Smith & Co., (Mchy. Dealer), Birmingham, Ala.—Wants prices on following:

Moulder.—15 in. and equipment.

Sawmill.—8 or 9 ft. short log American sawmill.

Miscellaneous

Pipe.—Ralph U. Green, 244 S. Beach St., Daytona Beach, Fla.—Wants prices on large amount of 4 in. and 6 in. either galvanized or cast iron water pipe, second hand.

Wall Safes.—L. C. Tolson Co., Builders Exchange Bldg., Richmond, Va.—Wants prices on wall safes.

Fire Extinguishers.—Francis M. Moise, Agent, 120 N. Main St., Sumter, S. C.—Wants prices on portable fire extinguishers new or second-hand.

Building Material and Equipment

J. J. McDevitt, Builders Exchange, Charlotte, N. C. wants price on following:

Cast Stone

Linoleum Floors

Marble

Metal Doors

Plaster Board

Sprinklers

Steel Sash and Trim

Wire Glass.

Thomas S. Brandon, Titusville, Fla., wants prices on following:

Electric Refrigerators

Floors.—terrazzo and composition

Metal Ceilings

Roof.—built-up

Hollow Tile.

Bids Asked

Air Conditioning Systems.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids June 21 for condensing water supply and discharge systems for air conditioning buildings in Triangular Group at Washington, D. C.

Air Conditioning System.—Chief, Bureau

of Yards and Docks, Navy Dept., Washington—Bids June 22 for air conditioning system at naval air station at Pensacola, Fla.

Asphalt.—State Highway Bd., J. W. Barnett, Chmn., Atlanta, Ga.—Bids June 15 for 3300 tons cold mix surfacing, f.o.b. Monticello, Ga.

Blueprinting.—U. S. Engineer Office, Huntington, W. Va.—Bids June 15 for blueprinting for U. S. Engineer Office, Charleston, W. Va.

Boat Repairs.—U. S. Engineer Office, Wilmington, N. C.—Bids June 14 for repairs to vessels.

Boiler Plant and Underground Heat Distribution System.—War Dept., office of Constructing Q. M. Bolling Field, Anacostia, D. C.—Bids June 28 for boiler plant and underground heat distribution system; plans, etc., on application; J. L. Alverson, Capt., Q. M. Corps Constructing Q. M.

Brick Paving.—Richmond, Va., R. Keith Compton, Director of Public Works.—Bids June 14 for 4200 sq. yds. vitrified brick pavement on 6-in. conc. base, 1030 cu. yd. excavation.

Bridges.—See Beaufort, S. C., Bridges Proposed.

Building Materials.—Quartermaster, U. S. Army, Fort Hoyle, Md.—Bids June 14 for 2000 bd. ft. fir lumber, 2000 bd. ft. yellow pine lumber, 25 pieces pressed wood, 50 pieces wall board, 15 white pine doors, 20 balls chalk line, wire brads, wood screws, toggle bolts, corrugated fasteners, etc., Cir. 154.

Cafeteria Equipment.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington—Bids June 29 for cafeteria equipment for U. S. court house, Memphis, Tenn.

Cement.—U. S. Engineer Office, War Dept., Memphis, Tenn.—Bids June 14 for furnishing cement for Schd. No. 1: Items 1, 1A, 1B, 2, 2A and 2B, 200,000 barrels, American Portland cement in cloth bags for delivery at U. S. Government Casting Plant, fleet, Cairo, Ill.; Items 3, 3A, 3B, 4, 4A, and 4B, 200,000 barrels American Portland cement in cloth bags for delivery at U. S. Government Casting Plant, Fleet, Fulton, Tenn. (51 mi. above Memphis, Tenn.)

Coal.—Quartermaster Supply Officer, Ft. Sam Houston, Tex.—Bids June 24 for 38 tons smithing coal, Cir. 246.

Dredging.—U. S. Engineer's Office, Cincinnati, Ohio—Bids June 28 for dredging channel in Ohio River at Verbal Har, Vevay, Indiana, and Rising Sun Bar, Rising Sun, Ind.

Dredging.—U. S. Engineers Office, U. S. Army, 39 Whitehall St., New York—Bids June 28 for dredging approximately 277,000 cu. yds. material in Passaic River, N. J.

Dredging.—Pensacola Intracoastal Waterway, Montgomery, Ala., June 28—See Construction News—Miscellaneous Construction.

Elevators.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington—Bids June 16 for elevators for National Institute of Health building, Washington, D. C.

Forage.—Quartermaster Supply Officer, Army Base, Brooklyn, N. Y.—Bids June 17 for various deliveries, Cir. 221.

Fuel Oil.—U. S. Engineer Office, Savannah, Ga.—Bids June 16 for 40,000 gals., Cir. 153.

Gas and Water Main.—Constructing Quartermaster, Maxwell Field, Ala.—Bids June 30 for gas and water mains, sanitary and storm sewers in officers' quarters.

Gasoline and Oil.—U. S. Property and Disbursing Officer, Militia Bureau, Lansing, Mich.—Bids June 20, Cir. 3.

Gasoline Fueling System.—Constructing Quartermaster, U. S. Army, Bowman Field, Ky.—Bids June 27 for fueling system.

Gasoline.—Quartermaster, U. S. Army, Depot, 20th and C Sts., N. W., Washington—Bids June 15 for 136,000 gals. gasoline, Cir. 70.

Gas Oil.—U. S. Engineer Office, U. S. Army, Mobile, Ala.—Bids June 28 for 1500

gals. gas oil during next fiscal year, Cir. 469.

Gasoline System.—Constructing Quartermaster, Ft. McPherson, Ga.—Bids June 21 for gasoline system at Candler Field, Atlanta.

Insignia.—U. S. Engineer Office, War Dept., Huntington, W. Va.—Bids June 13—Engineer Insignia—No. 10 B. W. G. steel plate and 3/16 in. soft brass plate.

Lighting System.—Constructing Quartermaster, Maxwell Field, Ala.—Bids June 30 for street lighting system in technical building area.

Lumber.—Webb County, Texas, J. P. Morton, County Road Supt., Laredo, Texas—Bids June 13 for bridge lumber.

Lumber.—U. S. Engineer Office, Vicksburg, Miss.—Bids June 14 for 30,000 ft. lumber.

Manila Rope.—U. S. Engineer Office, First District, New York, Bids June 13 on large quantities, Cir. 328.

Metal Partitions, Wood Counters and Railings, Metal Shelving, Incidental Plumbing and Electrical Changes, Etc.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids June 16, U. S. Post Office, Baltimore, Md.

Oil.—U. S. Engineer Office, Savannah, Ga.—Bids June 16 for 300,000 gals. Diesel oil, Cir. 152.

Oils.—Quartermaster Supply Office, Fort Sam Houston, Tex.—Bids June 17 for kerosene and fuel oil for various deliveries, Cir. 247.

Oil Storage System.—Constructing Quartermaster, Ft. Sam Houston, Tex.—Bids June 18 for oil storage system.

Oil Storage System.—Office of Constructing Quartermaster, Maxwell Field, Montgomery, Ala., M. A. McFadden, Capt., Q. M. C., Constructing Q. M.—Bids June 21 for constructing oil storage system at Maxwell Field.

Oil Storage Building.—Constructing Quartermaster, Barksdale Field, Shreveport, La.—Bids June 20 for oil storage building.

Oil Storage System.—War Dept., Construction Service, Office Q. M., Langley Field, Va.—Bids June 21 for furnishing labor, materials and constructing oil storage system; Geo. H. Schumacker, Capt., Q. M. Corps, Constructing Q. M.

Paper.—Engineer, 8th Corps Area, Fort Sam Houston, Tex.—Bids June 14 for 6000 lb. map paper, 25x38 in. Cir. 5.

Painting.—Bd. of Awards, Public Improvement Comsn., Bureau of Construction, Room 324, City Hall, Baltimore, Md., bids June 15—Painting plastered walls and ceilings and conc. surfaces in finished portions of school buildings in groups Nos. 1, 2 and 3. H. J. Leimbach, Supvg. Engr.

Paving.—City of Baltimore, Md., George Cobb, Highways Engr.—Bids June 15 for grading, curbing and paving with cement conc. road in Cont. 622 in vicinity of Prettyboy Dam, 12,500 sq. yds., and streets in Cont. 623, 14,8000 sq. yds.

Photographic Paper and Developing Powder.—U. S. Navy, Navy Yard, Philadelphia, Penn.—Bids June 13 for 80 rolls paper and 100 packages powder, Req. 5004 NSAF.

Post Office.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids July 1 for erecting U. S. Post Office at Grove City, Pa.

Post Office.—Mount Airy, N. C., June 24. See Building News—Government and State.

Post Office.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.—Bids July 8 for erecting U. S. Post Office at Rochester, N. Y.

Post Office.—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington—Bids June 17 for U. S. post office, Kingston, N. Y.

Repairs.—U. S. Engineer Office, War Dept., Memphis, Tenn.—Bids June 15 for furnishing all labor and materials and performing

all work for making emergency repairs and minor current repairs to plant within the limits of Third Field Area of the Memphis Engineer District.

Roads.—State Highway Dept., Dover, Del. Bids June 28 for contracts 41B, 42D, 253, 254, involving 2060 cu. yd. excav., 1060 cu. yd. conc. pavement, 650 lin. ft. expansion joint, 1000 tons stone base course, 400 tons conc. surface course, 3200 tons slag base course, 10 cu. yd. class A conc., 1500 lb. catch basins, 300 lin. ft. C. M. pipe, 160 lin. ft. 15-in. R. C. pipe, 270 lin. ft. R. C. pipe, 36 lin. ft. 24-in. R. C. pipe, 36 lin. ft. 30-in. R. C. pipe, 500 sq. yd. class A conc. gutter.

Roads.—Public Buildings and Public Parks of National Capital, Col. U. S. Grant 3rd, Director, Washington, D. C.—Bids June 14 for pavement, curbs, gutters, water supply and drainage systems, on Mall.

Roadwork, etc.—Constructing Quartermaster, Barksdale Field, La.—Bids June 30 for constructing aprons, runways, electric current, street sidewalks, service road, drains and water service pits.

Roofing.—Office Quartermaster, Fort Hoyle, Md.—Bids June 14 for reroofing 3 buildings approximately 106x202 ft., Cir. 148.

School.—Jonesboro, Tenn., June 14. See Building News; Proposed—Schools.

School Supplies and Equipment.—Calcasieu Parish School Bd., H. A. Norton, Sec., Lake Charles, La.—Bids July 5 for furnishing fuel, furniture and school supplies and reroofing Vincent school building.

Screens.—Office of Constructing Quartermaster, Q. M. C., Langley Field, Va.—Bids June 23 for construction of window, door and porch screens for noncommissioned officers Service Club and Guard House.

Seawall Repairs.—U. S. Engineer Office, Boston, Mass.—Bids June 15 for repairs to seawall at Gallops Island, Boston Harbor, Mass., Cir. 50.

Sewage Disposal Plant.—Columbia, S. C., June 14—See Building News Proposed—Hospitals, Sanatoriums, Etc.

Steel Tower.—U. S. Engineer Office, Honolulu, T. H.—Bids June 23 for construction 1 rigid steel tower at Fort Weaver, Island of Aahu, T. H., Cir. 80.

Theodolite.—Signal Supply Officer, Army Base, Brooklyn, N. Y.—Bids June 24, Cir. 152.

Toilet Room.—Treasury Dept., Jas. A. Wetmore, Act. Supv. Archt., Washington—Bids June 23 for installing new toilet room, etc., U. S. post office and court house, Oxford, Miss.

Tubes and Tubing.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids June 28 for steel tubes and tubing, delivery various east and west coast points, Schd. 8234.

Water Lines.—Chief, Bureau of Yards and Docks, Navy Yard, Washington, D. C.—Bids June 15 for water lines at marine barracks.

Wire Strand.—U. S. Engineer's Office, foot of Prytania St., New Orleans, La.—Bids June 16 for 1,710,000 lin. ft. steel wire strand, Cir. 221.

DEPARTMENT OF AGRICULTURE.—Washington—Bids as indicated on following:

Stokers.—Furnish and install 2 or 3 automatic underfeed, Pro. 2027, June 10

Fence Crossings.—2 on Niobrara Reservation, Valentine, Nebr., Pro. 2015, June 14

Automobile.—Coupe type for Newell, S. Dak., Pro. 2036, June 14

Automobile.—Truck for Newell, S. Dak., Pro. 2035, June 14

Truck.—Automobile for Alhambra, Calif., Pro. 2034, June 17; for Zanesville, Ohio, Pro. 2033, June 10; for Tifton, Ga., and Oxford, N. C., Pro. 2032, June 10

DISTRICT COMMISSIONERS. District of Columbia, District Bldg., Washington, D. C.—Bids on dates indicated for following:

Bowling Alleys.—Furnishing and installing 2 bowling alleys and equipment at District Training School, near Laurel, Md., June 13

MARINE CORPS, QUARTERMASTER. Navy Bldg., Washington—Bids on dates indicated, delivery as stated on following:

Trucks.—60 one-ton trucks, delivery Philadelphia, Pa. Schd. 930, June 17.

Steel Chute.—Installation, Quantico, Va., Schd. 937, June 22.

MARINE CORPS, QUARTERMASTER. Navy Bldg., Washington—Bids on dates indicated, delivery as stated on following:

Plumbing Supplies.—Quantico, Va., Schd. 917, June 20

Switchboards and Wire.—Philadelphia, Pa., Schd. 924, June 24

Bake Oven.—Portable, Indian Head, Md., Schd. 929, June 15

Refrigerating Unit.—Mechanical, New London, Conn., Schd. 931, June 15

Drinking Fountains.—Quantico, Va., Schd. 932, June 17.

MARINE CORPS, QUARTERMASTER. Navy Building, Washington, D. C.—Bids on dates indicated, delivery as stated on following:

Steel.—Bids June 17, Quantico, Schd. 936

Plaster.—Bids June 15, Quantico, Schd. 940

Barrels and Excelsior.—Bids June 24, Quantico, Schd. 942

Miscellaneous Hardware.—Quantico, Schd. 942, June 20

Telephone Supplies.—Bids June 20, Quantico, Schd. 945

Mechanical Refrigerating Unit.—Bids June 20, Philadelphia, Penn., Schd. 946

Tachometers and Clocks.—Bids June 22, Quantico, Va., Schd. 949.

NAVY DEPT., BUREAU OF SUPPLIES AND ACCOUNTS. Washington, D. C.—Bids June 21 for following schedule numbers and delivery as stated:

Gauges.—Tank, Hydrostatic type, delivery New York and San Francisco, Calif., Schd. 8150

Flavor.—Lemon and vanilla, non-alcoholic, delivery various east and west coast points, Schd. 8179.

NAVY DEPT., BUREAU OF SUPPLIES AND ACCOUNTS. Washington, D. C.—Bids June 14 for following schedule numbers and delivery as stated:

Carbons.—Searchlights, plates, brushes, delivery various east and west coast points, Schd. 8143

Globes.—Flanged-head, delivery various east and west coast points, Schd. 8147

Twine.—Cotton and Flax, delivery Boston, Schd. 8177

Trailers.—Warehouse type, delivery New York and San Francisco, Calif., Schd. 810

Machine.—Tiering or elevator, delivery New York and San Francisco, Calif., Schd. 8211

Condenser.—Pumps and meters, delivery New York and San Francisco, Calif., Schd. 8142

Fiber.—Insulating, delivery Brooklyn, N. Y., and Mare Island, Calif., Schd. 8144

Saws.—Bank, cross-cut, miter box, etc., delivery various east and west coast points, Schd. 8146

Aluminum-Alloy.—Sheets, shapes, rod, bars, tubing, pipe, rivets, bolts, screws, nuts and pipe fittings, delivery various east and west coast points, Schd. 8175

Pump.—Portable, electric and spare parts, delivery Puget Sound, Wash., Schd. 8133

Blades and Hubs.—Metal, propeller, aircraft, delivery east and west coast points, Schd. 8165

Water Softening Unit.—Delivery New York and San Francisco, Calif., Schd. 8170

Compasses.—Aircraft, delivery Washington, D. C., Schd. 8176

Lathes.—Engine, selective head, motor driven, delivery New York and San Francisco, Calif., Schd. 8152; delivery Mare Island, Calif., Schd. 8154

Helmets and Breastplates.—Divers, delivery Washington, D. C., Schd. 8159

Regulators.—Steam pressure, electrically actuated and spare parts, delivery Norfolk, Va., Schd. 8160

Dish-Washing Machine.—Electrically operated, delivery Parris Island, S. C., Schd. 8174

Crane.—Automobile or tractor operated, delivery New York or San Francisco, Calif., Schd. 8208

Tractor.—Delivery New York or San Francisco, Calif., Schd. 8200

Truck.—Electric storage battery, delivery New York or San Francisco, Schd. 8212

Valves.—Corrosion, resisting steel, delivery Brooklyn, N. Y., Schd. 8151

Taps, Dies, Tap Wrenches and Diestocks.—Delivery east and west coast points, Schd. 8156.

U. S. ARMY AIR CORPS. Wright Field, Dayton, Ohio—Bids on dates indicated for following:

Steel Pipe and Bends.—10,400 ft. welded and 10 bends, Cir. 449, June 13

Excavator.—1 trench, Cir. 451, June 13

Cleaning Machine.—8 electric-driven, portable type, Cir. 450, June 13

Printer Assemblies.—8 contact, Cir. 452, June 13

Lathes.—15 toolroom precision, 13 in., Cir. 447, June 13

Safety Belt Assemblies.—300, Cir. 448, June 13.

U. S. COAST GUARD. Washington, D. C.—Bids on dates indicated for following:

Transmitters.—10 to 20 200-watt radio, bids June 15

Cable.—30,000 to 55,000 ft. telephone cable, rubber insulate, June 13.

U. S. DEPARTMENT OF COMMERCE. Washington, D. C.—Bids on dates indicated for following:

Steel Cases.—25 to 90, Pro. 24,431, June 10

Steel Posts.—5000 to 20,000 5 ft. steel posts, 5000 to 10,000 triangles and 5000 to 10,000 braces, Pro. 24,420, bids June 13

Radio Receivers.—30 to 100 superheterodyne radio receivers, Pro. 24,439, June 14.

Laboratory Supplies.—100 cover glasses, 2 burettes, 2 thermometers, chemicals, pipettes, burettes, filters, test tubes, etc., Pro. 24,441, June 13

NAVY DEPARTMENT, BUREAU OF SUPPLIES AND ACCOUNTS. Washington, D. C.—Bids June 14 for following, delivery indicated:

Gauges.—Water reflex, delivery Brooklyn, N. Y., Schd. 8187

Wheels.—Fan, force draft blower, delivery Mare Island, Calif., Schd. 8223

Tubes.—Steel, seamless, delivery various east and west coast points, Schd. 8254

Plates.—Steel, delivery Mare Island, Calif., Schd. 8235

Magnetic Testing Equipment.—Delivery Washington, D. C., Schd. 8246.

U. S. NAVY DEPARTMENT, BUREAU OF SUPPLIES AND ACCOUNTS. Washington, D. C.—Bids June 21 on dates indicated on following, delivery as stated:

Outfits.—Sprayers pint, delivery Mare Island, Calif., Schd. 8153

Chisels.—Machinists', delivery various east coast points, Schd. 8171

Blades.—Hack saw, tungsten, delivery Brooklyn, N. Y., and Mare Island, Calif., Schd. 8172

Drills.—Sensitive, motor driven and spare parts, delivery various east and west coast points, Schd. 8194

Stones.—Sharpening, delivery various east and west coast points, Schd. 8195

Extinguishers.—Portable fire, delivery Brooklyn, N. Y., and Hampton Roads, Va., Schd. 8196

Sand.—Molding, delivery Brooklyn, N. Y., Schd. 8197

Shovels.—Delivery various east and west coast points, Schd. 8198

Ventilating Sets.—Delivery Brooklyn, N. Y., Schd. 8192

Ratchet Braces.—Drills, breast and hollow handle, delivery east and west coast points, Schd. 8199

Hammers.—Scaling, pneumatic, delivery Philadelphia, Pa., and Puget Sound, Wash. Schd. 8200

Screwdrivers.—Delivery east and west coast points, Schd. 8201

Shears.—Tinners' and sailmakers', delivery various east and west coast points, Schd. 8202

Rules and Tapes.—Delivery various east and west coast points, Schd. 8203

Wood Boring Bits, Chisels, Knives and Scrapers.—Delivery various east and west coast points, Schd. 8205

Calipers, Dividers, Gauges, Planes and Squares.—Delivery various east and west coast points, Schd. 8206

Plotters.—Aircraft, delivery Washington, D. C., Schd. 8230

Valves.—Air reducing and spare parts, delivery New York, N. Y., or San Francisco, Calif., Schd. 8190

Lathe.—Screw cutting, geared head, motor driven and electrical spare parts and tools, delivery Portsmouth, N. H., Schd. 8193

Clamps and Punches.—Delivery various east and west coast points, Schd. 8204

Leather, Belting, Lacing, etc.—Delivery various east and west coast points, Schd. 8207

Trucks.—Motor, delivery east and west coast points, Schd. 8228

Chassis.—Truck, motor with mounted body and accessories, delivery Philadelphia, Pa., Schd. 8229

Truck.—Electric, storage battery, delivery Hampton Roads Va., Schd. 8252.

U. S. MARINE CORPS, QUARTERMASTER. Washington, D. C.—Bids on dates indicated, delivery as stated, on following:

Terra Cotta Pipe.—Quantico, Va., June 15, Schd. 935

Lumber.—White pine, Quantico, Va., June 15, Schd. 939

Air Compressor.—Quantico, Va., June 15, Schd. 941

Field Gasoline Engines.—Washington, D. C., June 22, Schd. 948

Steel Storage Bins.—Quantico, Va., June 22, Schd. 950

Paint.—1000 gals., ready-mixed, Philadelphia, Pa., June 20, Schd. 947

Pipe and Fittings.—600 ft. terra cotta, bell and spigot type, salt glazed, standard weight in 20 ft. lengths, 6-in., 15-in., 18-in. and 20-in., Item 21; 87 fittings, terra cotta pipe, Item 22; Schd. 935, date June 15.

INDUSTRIAL NEWS

Ditzler Color Company Sales

The Ditzler Color Company, Detroit, Mich., subsidiary of the Pittsburgh Plate Glass Company, and an old and well known manufacturer of automotive lacquers and other finishing materials, had larger sales for the period March 15 to April 15 than for any previous month in its history. By reducing the time required to finish an automobile body from approximately one month to 48 hours, Ditzler finishes have "definitely contributed toward the success of mass production methods." In its Bramley mills the company produces its well known Ditz-Lac colors. A recent achievement of the company is the development of a complete line of synthetic enamels marketed under the name "Ditzco."

Western Electric Adjustment

As a further measure for spreading employment beginning July 1, the maximum working schedule for all employees, including officers and staff, of the Point Breeze Works, Baltimore, of the Western Electric Company, will be further reduced from five to four and a half days a week, with corresponding reduction in remuneration, according to William H. Meese, vice president and works manager. Under this schedule, to the extent that requirements of the business will permit, efforts will be made to close plants and offices at all locations on alternate Fridays.

Working on Basis of Full Week

The Commercial Shearing & Stamping Company, Youngstown, Ohio, is working on a full week basis of five and a half days, and it is announced that present business warrants continued activity on that basis. The company has just completed and delivered 40 dump bodies to the Maryland State Roads Commission, Baltimore, of which 36 units are rear dumps and four are three-way dumps.

Heads Austin Manufacturing Company

S. F. Beatty, known to road builders of the country through his activities as president of the Austin-Western Road Machinery Co. and the Road Machinery Manufacturers' Association, as well as through many years' service as officer and director of the American Road Builders' Association, has been elected president of the Austin Manufacturing Co., Chicago. W. T. Beatty, for many years president and general manager of Austin Manufacturing Co., has been elected chairman of the board and K. N. Forbes has been elected vice-president.

Second Mundet Branch Office

L. Mundet & Son, Inc., of Texas, Houston, announce the establishment of a sub-branch office at 4600 Gaston avenue, Dallas, to meet a demand from the trade in Dallas territory. A. A. Stone, formerly sales engineer of the Houston office, is in charge. He has had wide experience in both cork insulation and high temperature lines. Stocks of Mundet "Jointite" cork board, Mundet "Jointite" cork pipe covering, Mundet natural cork insulation for taking care of machinery noises and vibration, and other Mundet products will be stocked at Dallas. For high temperature insulation, Keasbey & Mattison products will be stocked. To replace Mr. Stone at Houston, Walter R. Rochow has been employed to assist Willard Selle, manager of the Houston office.

Florida Chain Belt Distributors

Two new distributors were recently appointed by the Chain Belt Company, Milwaukee, Wis., to handle the company's line of Moto-Mixers, central mixing plants, pavers, concrete mixers, plaster and mortar mixers, pumps, saw rigs and other construction equipment in Florida territory: The McDonald Tractor Company, Orlando, and the Burgman Tractor Equipment Co., 8 Riverside Viaduct, Jacksonville.

Republic Rubber Working Full Week

The Republic Rubber Company, Youngstown, Ohio, is now operating on a full week basis, five and a half days. Several departments of the company are working 16 hours daily.

Trade Literature

Ball Bearing Service.—Representing 15 months' work in compilation, the 1931 Supplement to M-R-C Ball Bearing Service Manual has been issued by M-R-C Bearings Service Co., division of the Marlin-Rockwell Corporation, Jamestown, N. Y. The publication, containing a total of 60 pages, presents ball bearing replacement tables for passenger cars, trucks, buses, tractors, farm machinery, aircraft engines, marine engines, etc. The SRB Ball Bearing Manual has been issued by Standard Steel and Bearings Incorporated, Plainville, Conn., also a division of the Marlin-Rockwell Corporation. This publication is a condensed handbook for the aid of the engineer in the selection and application of SRB and M-R-C ball bearings. Southern branch offices of M-R-C Bearings Service Co. are located in Atlanta, Dallas and Kansas City.

Fisher Strainers.—The Fisher Governor Company, Marshalltown, Iowa, manufacturers of power plant specialties, have issued Bulletin No. 23 covering a line of "Free-Flow" Fisher Type 260 strainers. Outstanding features are: Large screen area, thus handling pipe capacities of steam, air, water, oil, gas, or other fluid with a very small pressure drop, and bodies of either nickel semi-steel or bronze construction in 3/4-inch to 2-inch sizes inclusive. Strainers are regularly furnished with perforated bronze electric weld lap-seam non-collapsible screen and the unit is self-cleaning through the blow-off connection which regularly should be furnished and installed with a small globe valve at that point.

Gypsum Lath.—To present a clearer understanding of gypsum lath and the advantages it affords to architects, builders and prospective home owners, the Gypsum Association, 211 West Wacker Drive, Chicago, has issued its latest publication under the title "Facts About Gypsum Lath." It may be obtained from the association without cost.

Home Building and Ownership.—The third volume of the final reports on the President's Conference on Home Building and Home Ownership has been issued from Washington. "Slums, Large-Scale Housing and

Decentralization," is the third of a series of 11 and contains reports of four of 31 Conference Committees: Blighted Areas and Slums, Large-Scale Operation, Business and Housing, and Industrial Decentralization and Housing.

Tentative Program for Textile Show

Greenville, S. C., June 6.—Preparations are being made for what promises to be the most interesting Southern Textile Exposition ever held in Textile Hall, according to William G. Sirrine, president and treasurer.

"Great attention is being devoted to securing the presence of as many executives, superintendents, master mechanics, department heads and operatives as possible from the Southern states," Mr. Sirrine said. "The show is being confined chiefly to persons interested in the cotton, silk, rayon, and worsted mills, and dyeing, bleaching and finishing establishments. 'Courtesy cards' will be distributed in advance to all Southern textile plants, one for each car which may be driven to Greenville during show week. These will allow visitors to park their cars anywhere in Greenville."

The program so far arranged for show week, which begins October 17, includes the meeting of the Textile Division of American Society of Mechanical Engineers, under direction of the following committee: Henry M. Burke, chairman, Manager Dutchess Bleachery, Inc., Wappinger Falls, N. Y.; Paul A. Merriam, vice chairman, chief engineer, U. S. Finishing Co., Providence, R. I.; H. V. W. Scott, manager, Van Ralte Co., Paterson, N. J.; William L. Conrad, construction engineer, New York City; Clifford H. Ramsey, president, Morrison Machinery Co., Paterson, N. J.; Mark A. Goldrick, Jr., secretary, engineer, Dutchess Bleachery, Inc., Wappinger Falls, N. Y.; Reynolds Longfield, chief engineer, Sibly Mfg. Co., Augusta, Ga.; A. W. Benoit, engineer, Charles T. Main, Inc., Boston, Mass.; Albert Palmer, research engineer, Crompton & Knowles Loom Works, Worcester, Mass.; and Harry D. Learnard, executive engineer, Pacific Mills, Lyman, S. C., who has been appointed to direct the meeting. Subjects of general interest will be discussed by prominent engineers.

The autumn Convention of the Southern Textile Association is to be held October 21.

Low bid to erect a new post office building at Palm Beach, Fla., was submitted to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, by the Rohan Company, Inc., Garden City, Long Island, N. Y., at \$227,800.

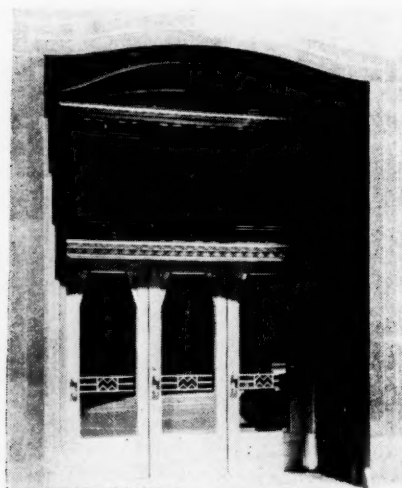
Attractive Bronze Work Features New Office Building

A splendid example of the use of bronze work for utilitarian and decorative purposes is presented in the accompanying illustrations of such work in the Tower Petroleum Building at Dallas, Texas. In the main entrance a combina-



Bronze Treatment in Main Corridors

tion of wrought and cast bronze of modern design is shown, while door frames, doors and store frames of the main corridor in its inside stores, are made of



Main Entrance to Tower Petroleum Building, Dallas

built-up bronze construction with ornamental bronze casting at the bottom. The work was furnished by J. S. Heath Co., Waukegan, Ill.

\$300,000 Lead and Zinc Plant

Picher, Okla. — Construction has started on a new 3600-ton lead and zinc concentrating mill near Picher in the Tristate mining field, for the Eagle Picher Mining and Smelting Company, subsidiary of the Eagle-Picher Lead Company, Chicago. The new mill, to be the largest of its kind in the country, will have a capacity of 300 tons of ore an hour and will cost about \$300,000.

Southside Virginia, Incorporated

Petersburg, Va.—At a meeting of Brunswick County tobacco growers, E. H. Crutchfield, president of the Petersburg Chamber of Commerce, presented a plan for organizing Southside Virginia interests, agricultural and industrial, into an association to be known as Southside Virginia, Inc., similar to Southwest Virginia, Inc., and like regional organizations.

Lynchburg Post Office Award

Lynchburg, Va.—General contract to erect a new Federal building here to house the post office and Federal court has been awarded by the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, to Ralph Sollitt & Sons Construction Company, South Bend, Ind., at \$338,300. This contract was previously awarded, but it is understood the successful bidder at that letting failed to furnish satisfactory bond.

Southern Railway Moves Department

Atlanta, Ga.—Revenue station and overcharge claim accounting offices of the Southern Railway System will be moved from Cincinnati to Atlanta, effective July 1, according to J. B. Munson, vice-president, Cincinnati. Employees of the railway now at Cincinnati who will come to Atlanta include: W. G. Casteel, auditor of station accounts, to become assistant auditor of station accounts in Atlanta; D. E. Driscoll, auditor of receipts, who will become assistant auditor of freight receipts; G. M. Santry, assistant auditor of receipts, who will become assistant auditor of passenger receipts, and W. V. Driscoll, auditor of overcharge claims, who will become assistant auditor of overcharge claims.

Railway Development Meeting

The American Railway Development Association will hold its twenty-fourth annual meeting, June 15, 16, 17, at the Brown Hotel, Louisville, Ky. With it is combined the annual meeting of the Railway Development Association of the Southeast. Addresses scheduled for presentation include the following:

"Kentucky's Program of Progress," Judge Huston Quin, of the Kentucky Progress Commission; "Water Transport," J. J. Donohue, general claims attorney, L. & N. R. R.; "A Comprehensive Regulation of All Transportation Agencies," Charles Barham, Vice-President, N. C. & St. L. R. R.; "Motor Truck Competition in Transportation of Perishable Products," W. E. English, Frisco R. R.; "Transporting the Cotton Crop," George E. Schnitzer, Rock Island Lines; "Relation Between Agriculture and Industry," Dr. James S. Thomas, Commonwealth and Southern Corporation; "The General Railroad Situation," J. M. Fitzgerald, vice-chairman, Committee on Public Relations of the Eastern Railroads.

Other papers and addresses are also on the list. Secretary-Treasurer of the association is Arthur W. Large, General Agricultural Agent, Chicago, Rock Island & Pacific Railway, Chicago.

5,336,000 Cubic Yards Dredging

Montgomery, Ala.—Bids will be opened June 28 in the office of the United States Engineer, Montgomery, for dredging the Pensacola-Mobile Intracoastal Waterway, from the mouth of Portage Creek, Ala., to the 11-foot hydrographic contour in Bon Secour Bay, Ala. The project will involve 5,336,000 cubic yards, place measurement.

\$236,000 Federal Building Bid

Jefferson City, Mo.—Low bid to erect a new Federal building here has been submitted to the Treasury Department, Washington, Jas. A. Wetmore, Acting Supervising Architect, by A. W. Kutsche & Co., Detroit, Mich., at \$236,290 for Carthage stone. The building will be 3 stories and basement, 83 by 108 feet. Egerton Swartwout, New York, and Klipsteinn & Rathmann, St. Louis, are the architects.

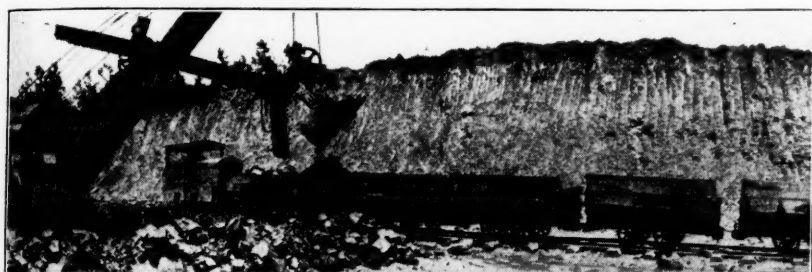
Charleston-Bluefield Airline

Bluefield, W. Va.—Harvey Amos, manager of the Bluefield Airport, has inaugurated a new airline service for passengers between Bluefield and Charleston. Daily service will be maintained with one plane leaving Charleston at 10 o'clock each morning and another at 5 o'clock each afternoon.

Good Words Unsolicited Land a Whitcomb Order . . .



These two pictures show the Whitcomb 9-ton gasoline locomotive with cars on track at the Boddie & Powell mine, Madisonville, Kentucky.



"VERY EFFICIENT" AFTER FIVE YEARS

THE above statement, coming from a firm of the high standing of Boddie & Powell, was convincing testimony, and was followed by the sale of two 20-ton Whitcombs to the Cuban-American Corporation. The order was obtained in the face of strong competition from home and foreign firms, and is very good evidence of Whitcomb's reputation for excellence and reliability.

Whitcomb locomotives perform faithfully under most adverse conditions. The outstanding features which establish their superiority in mining, quarrying and construction operations include low center of gravity, high track clearance, the cross-equalizer that keeps the locomotive in balance on a rough track, and high tractive power on low fuel costs.

Whitcombs make "the economy grade" so desirable in many industries today. Write us regarding your haulage problems.

CLASS OF SERVICE DESIRED		CABLE	
TELEGRAM	FULL RATE	DAY LETTER	DEFERRED
NIGHT MESSAGE	NIGHT LETTER	WEEK END LETTER	WEEK END LETTER
Persons should check class of service desired. Otherwise message will be transmitted as a full rate telegram.			

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT J. C. WILLYER, FIRST VICE PRESIDENT

Send the following message, subject to the terms on back hereof, which are hereby agreed to

F. S. Norcross, Jr.,
c/o Monroe B. Lanier,
Birmingham, Alabama

Boddie Powell advise have operated nine ton Whitcomb continuously for five years STOP Accurate maintenance records not available but estimate four hundred dollars for five years STOP Gas consumption about twenty five gallons eight hours continuous operation STOP Well pleased with locomotive advising very efficient on grades and estimate performance equal to fourteen ton steam

R. L. SCHLOTMAN

WESTERN UNION GIFT ORDERS ARE APPROPRIATE GIFTS FOR ALL OCCASIONS

Mr. F. S. Norcross, of the Cuban-American Manganese Corporation of Cuba, was in the market for haulage equipment for their new mining operation at El Cristo, and desired the opinion of an owner and user of a Whitcomb Locomotive. So he wired Mr. R. L. Schlotman, his Company's Purchasing Agent, to get an opinion from the Boddie & Powell Company regarding the Whitcomb used in their strip mining operations at Madisonville, Kentucky. Mr. Schlotman's telegraphic report is given above.

THE WHITCOMB LOCOMOTIVE COMPANY
ROCHELLE, ILLINOIS

WHITCOMB LOCOMOTIVES

High Point Post Office

High Point, N. C.—Excavation for the new post office building here has been completed and footings have been poured. Spence Brothers, Saginaw, Mich., are general contractors. The following sub-contracts have been awarded:

Reinforcing steel—Knoxville Iron Co., Knoxville, Tenn.
Structural steel—Bristol Steel & Iron Works, Inc., Bristol, Va.
Plumbing and heating—Public Service Plumbing & Heating Co., Saginaw, Mich.
Miscellaneous and ornamental iron—Koehler Bros., Saginaw
Aluminum windows and ornamental aluminum—Kawneer Co., Niles, Mich.
Cement—Richmond branch of Lehigh Portland Cement Co., Allentown, Pa.

\$323,000 Sanatorium Bids

Glenn Dale, Md.—Low bid to erect a sanatorium, refrigerating building and nurses' home at the Children's Tubercular Sanatorium, Buena Vista, near Glenn Dale, for the District of Columbia, was submitted by McCormick & Lenham, Philadelphia, Pa., at \$323,000. The sanatorium will occupy a tract of 216 acres purchased by the District of Columbia in 1930. Congress made an initial appropriation of \$625,000 for the project. Plans for the lay-out of buildings were developed by Lawrence Johnson, assistant to A. L. Harris, municipal architect.

Dr. T. B. Kidner, New York, is the consultant. Details were handled by the District Commissioners Committee, and construction will be in charge of Major H. L. Robb, U. S. Army, assistant engineer commissioner.

Cotton Mill Addition Progressing

Lancaster, S. C.—Construction is well underway on an addition to the plant here of Lancaster Cotton Mills, with work being handled by the company. The building will consist of a 4-story connection between Nos. 1 and 2 mills, approximately 100 by 125 feet, of slow-burning, mill-type construction, with maple top floors over waterproof felt, cast iron columns, new steel windows and some salvaged wood windows, five-ply pitch, felt and gravel roof. Robert and Company, Inc., Atlanta, Ga., architects and engineers for the project, have awarded major contracts as follows:

Structural steel—Atlanta office of Carolina Steel & Iron Company, Greensboro, N. C.
Miscellaneous iron—Austin Bros. Bridge Company, Atlanta
Steel windows—J. S. Thorn Company, Philadelphia, Pa., through Southern G. F. Company, Atlanta
Reinforcing steel—Southern G. F. Company
Cast iron columns—Paul Wright & Co., Birmingham, Ala.
Fire doors—The Kinnear Manufacturing Co., Columbus, Ohio, through Hoffman & Amick, Atlanta.

Development of New Cotton Fabric Spurs Industrial Activity in a Georgia Community

As a result of the development of a new fabric or cotton cloth of brownish gray color, which is said to wear well and launder easily, the Summerville Cotton Mills, manufacturers of cotton ducks and osnaburgs at Summerville, Ga., report that business is rapidly expanding and that prospects are bright for a big volume of business during the summer.

The new fabric is put through a patented preshrinking process to prevent further shrinkage. It is tailored into suits by the Whisnant Company of Summerville, and already several thousand garments have been turned out, the suits being sold direct to wearers. A direct mail advertising campaign has resulted in receipt of orders from practically every state in the Union, it is said, and the suits are being shipped now at the rate of several hundred daily, marketed under the trade name, "Gray Eagle."

Col. John D. Taylor, president of the Summerville Cotton Mills, is optimistic over the success of the new industry and looks for continued expansion.

10th SOUTHERN TEXTILE EXPOSITION

Textile Hall Greenville, South Carolina October 17 to 22 inclusive

Modern competition in textile manufacturing demands the most improved machinery and accessories, and the best grades of supplies. Through their use production costs are lowered and profits increased.

In Textile Hall, October 17 to 22, there will be in operation latest types of machinery used in cotton, silk, rayon, and wool mills, and in dyeing, bleaching and finishing plants.

Visitors to the Southern Textile Exposition will come from every southern state.

Complimentary passes will be sent by us to presidents, treasurers, superintendents, and department heads. Exhibitors will distribute thousands of complimentary tickets to operatives. Special railroad rates and Pullman car service have been granted by the railroads. All textile executives and operatives are cordially invited to attend.

Textile Hall Corporation, Greenville, S. C.



Harnessed Friction
 The Caldwell Friction Clutch operates upon the simple, logical principle of harnessed friction—like your automobile brake. It consists of only eleven parts—all so designed that their greatest strength is in the direction of greatest stress. A flexible band grips the entire circumference of the friction rim and transmits full power smoothly and steadily through any change of load and speed. Ordinary clutch troubles—usually caused by one of several adjustments being too tight—are not possible in the Caldwell Clutch because one screw adjusts it; one lever controls it.
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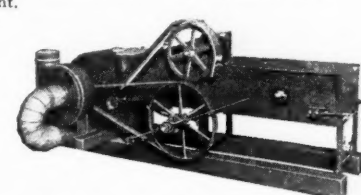
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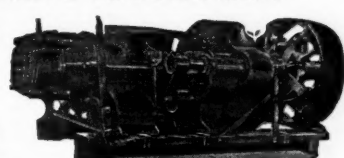
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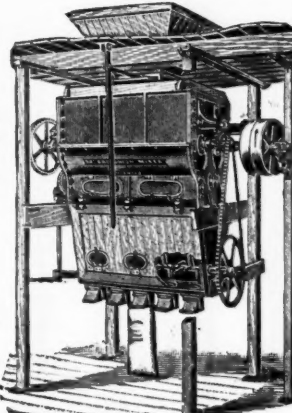
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FINANCIAL NEWS

Bond Issues Proposed

Ga., Jasper—Water Works—City, R. M. Edge, Mayor, receives bids June 10 for \$24,000 6% water works coupon bonds.

Miss., Kosciusko—Refunding—Governor Conner signed bill authorizing issuance of \$869,000 road refunding bonds, for Attala County.

Mo., Jefferson City—Refunding—City voted \$70,000 bonds.

Okla., Blackwell—School—City voted \$25,000 bonds.

Tex., Channing—Hartley County votes June 25 on \$150,000 bonds to improve 86 mi. State highways 5, 41, 54.

Tex., Gonzales—Gonzales County Road Dist. 1 voted \$350,000 road bonds. 5-19

Tex., Rusk—School—Rusk Independent School Dist., Cherokee County, plans building school; voted \$75,000 bond issue.

Bond Issues Sold

Miss., Belzoni—Tax Anticipation—Humphreys County Comms. sold \$30,000 6% notes to Union & Planters Co., Memphis, Tenn.

Miss., Jackson—Refunding—Hinds County Comms. sold \$90,000 refunding street improvement and liquidation bonds to Saunders & Thomas, Memphis, at 95.

Mo., Excelsior Springs—Emergency Bonds—City, H. G. Hopkins, Clk., sold \$10,000 bonds.

N. C., Fayetteville—Refunding—Cumberland County Comms., sold \$75,000 5% semi-annual road, bridge, court house and jail refunding bonds to T. A. Uzzell & Co., Greensboro, N. C., at par.

Okla., Tecumseh—Funding—Pottawatomie County Comms., sold \$35,000 bonds at par to Taylor-White Co., Oklahoma City.

Tex., Bandera—Funding—Bandera County, Carl F. Wheeler, County Judge, sold \$6000 bonds to First State Bank of Bandera at 97.50.

Tex., Panhandle—Funding—City, J. H. Wadsworth, City Sec., sold \$41,500 6% bonds to Dunne-Davidson-Ranson Co., Wichita, Kans.

Va., Norfolk—Funding—City of Norfolk, A. Preston Breeden, Asst. Dir. of Finance, sold \$1,750,000 4% bonds to Board of Sinking Fund Comms. at par. 6-2

Va., Richmond—Refunding—State, John M. Purcell, State Treas., sold \$3,440,000 4% and 3% bonds to syndicate headed by First & Merchants National Bank of Richmond at \$3,446,826. 5-26

New Financial Corporations

Ark., Springdale—Farmers and Merchants and First National Bank merged; to be known as First National Bank; working capital \$120,000; A. T. Lewis, Pres., and J. F. Stafford, Cashier.

Depositors of Richton Bank and Trust Co., Richton, Miss., plan reopening bank.

First National Bank of Texas City and Texas City National Bank, Texas City, Tex., merged, with J. A. Fambrough, Pres., Lawrence Smith, Cashier.

Bank of Baldwin, Baldwin, Miss., to reopen.

Plans are being formulated for organizing new bank to take over assets of First National Bank, Durham, N. C.

Arrangements have been completed for opening of Peoples Bank of Indianola, Indianola, Miss.

United Gas Corporation

Annual report of the United Gas Corporation, subsidiary of Electric Power & Light Corporation, New York, for the year ended December 31, 1931, has been issued. In addition to the consolidated statement of the company and subsidiaries, issued some time ago, the report includes a consolidated balance sheet and schedules of capital stock and long term debt outstanding, information

as to service and property and additions and development of subsidiaries, and a review of the company's activities during the year. The extensive natural gas producing, transmission and distribution system now owned by subsidiaries covers generally the Gulf Coast area from Pensacola, Fla., to Laredo, Texas, including portions of Louisiana, Mississippi and Alabama, with an extension to Monterey, Mexico.

Curbing Bid Peddling

A movement has been started by several trade associations in the building industry to overcome some of the glaring evils of bid peddling.

The Associated General Contractors of America has appointed a committee to confer with a committee of the American Institute of Steel Construction to determine what steps may be taken to eliminate unfair competition that has grown out of the practice. This is described as a serious effort to harmonize differences which have developed between general contractor and sub-contractor in the matter of bids. If given adequate support by interested groups it is believed the committee should accomplish much toward alleviating a serious evil in the construction industry.

This practice is being studied also by the Committee on Wastes and Undesirable Practices of the National Conference on Construction.

\$1,750,000 Norfolk Bonds

Norfolk, Va.—The City of Norfolk, A. Preston Breeden, assistant director of finance, has sold to the Board of Sinking Fund Commissioners, at par, \$1,750,000 funding bonds (temporary loan notes), to mature serially and carry an interest rate of 4 per cent. They will be dated June 1, 1932, and are a portion of a \$4,000,000 issue authorized by the General Assembly early in the year.

At the eighth annual convention and trade show of the Radio Manufacturers' Association recently held in Chicago, Fred D. Williams, Indianapolis, Ind., was elected president.

\$1,200,000 Courthouse Bonds Sold

Kansas City, Mo.—Courthouse bonds in the amount of \$1,200,000, voted in the Ten-Year-Plan, have been sold by the County Court to the National City Company of New York, and the City Bank of Kansas City, at \$1,201,228. The bonds will bear an interest rate of 4½ per cent. Of the total, \$1,000,000 is for the purchase of a site for a new courthouse in Kansas City, the block south of Twelfth street between Oak and Locust streets. The remaining \$200,000 will be used to remodel the courthouse at Independence. With the sale of the bonds and the disposition of a suit attacking their validity, plans will be made for the early construction of a new courthouse, for which \$4,000,000 was voted.

\$3,440,000 Virginia Securities

Richmond, Va.—Refunding bonds and certificates of indebtedness in an aggregate amount of \$3,440,000 have been sold by the State Sinking Fund Commission, on the basis of an average interest cost on both issues of 3.90. The securities consist of \$2,440,000 of bonds and \$1,000,000 certificates, the coupon rate bid on the former being 4 per cent and on the latter 3¾ per cent. Headed by the First & Merchants National Bank, Richmond, the purchasing syndicate also includes Mason-Hagan, Inc., and Scott & Stringfellow, both of Richmond, and First National Old Colony Corporation, New York.

\$1,250,000 Road Bonds Sold

Charleston, W. Va.—Road bonds in the amount of \$1,250,000 have been sold by the State of West Virginia, Governor William G. Conley, to the Bankers Trust Company and the Guaranty Company, both of New York, and the Kanawha Banking & Trust Company, Charleston, at an average interest rate of 4.436 per cent. The syndicate submitted a bid of 4.5 per cent on \$1,075,000 and 4.25 per cent on \$175,000, with a premium of \$117.90.

FLORIDA for FARMING

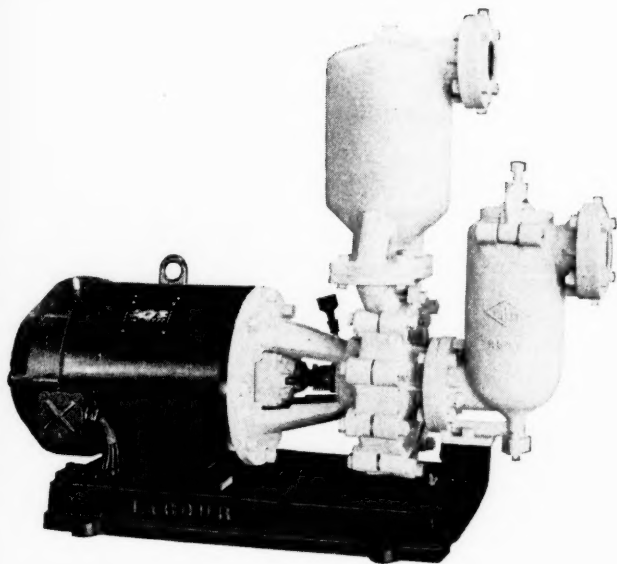
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GET FRESH
GASOLINE

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BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



PROPOSALS

Bids close July 12, 1932.

Sealed bids, in triplicate, subject to the conditions contained herein, will be received by the Veterans Administration, Room 764, Arlington Building, Washington, D. C., until 2:30 P. M., July 12, 1932, and then publicly opened, for furnishing all labor and materials and performing all work required for constructing and finishing complete at Veterans Administration Hospital, Batavia, New York, Buildings and Utilities. This work will include excavating, roads, walks, grading and drainage, reinforced concrete, hollow tile, brick work, cut stone, architectural terra cotta, slate stair treads, marble work, terrazzo, floor and wall tile, rubber tile, compressed asphalt tile and linoleum floors, iron work, structural steel construction, flagpole, steel sash, steel stairs, steel shelving, cabinets and partitions, shingle tile, slate, metal and built-up roofing, lightning conductors, skylights, roof ventilators, metal lathing, plastering, sound deadening, carpentry, metal weatherstrips, insect screens, platform scales, dumbwaiter, painting, glazing, hardware, plumbing, steel water tank and tower, refrigerating and ice making plant, zeolite water softening system, radial brick chimney, incinerator, heating and ventilating, electrical work, electric elevators and outside distribution systems, and such other items as shown or specified. Separate bids will be received for (a) General Construction, including Radial Brick Chimney and Incinerator; (b) Plumbing, Heating, Electrical Work; (c) Electric Elevators; (d) Steel Water Tank and Tower; (e) Refrigerating and Ice Making Plant; and (f) Zeolite Water Softening System; all as set forth on bid form. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract and, in making awards, the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Administrator, drawings and specifications may be obtained upon application in writing to the Construction Service, Room 764, Arlington Building, Washington, D. C. While no deposit will be necessary, return of the drawings and specifications within ten days after date of opening bids will be required. In case no bid is to be submitted, the return of plans and specifications, as soon as this fact has been determined and before the date for opening bids, is requested. Compliance with the requirement and with the request indicated will be considered in connection with future applications for drawings and specifications. George E. Ijams, Assistant Administrator.

Bids close June 23, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., May 26, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 23, 1932, for furnishing all labor and materials and performing all work for the complete steam distribution system, comprising concrete tunnels, conduits and other structures, and the piping and associated equipment to be installed, extending from the central heating plant to various public buildings at Washington, District of Columbia. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any subcontractor or material firm interested, and to quantity surveyors, provided a deposit of \$50 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 16, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., May 26, 1932.—SEALED BIDS, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 16, 1932, for furnishing all labor and materials and performing all work for the construction (except elevators and dumbwaiters) of the administration and laboratory buildings for the National Institute of Health, Washington, D. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50.00 is made for each set to assure its prompt return. One set will be furnished Builders' Exchanges, Chambers of Commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$50.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 24, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., May 27, 1932.—SEALED BIDS, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 24, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. p. o., etc., at Mount Airy, N. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding three sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any sub-contractor or material firm interested, and to quantity surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 15, 1932.

SEALED BIDS, indorsed "Bids for water lines Specification No. 6875," will be received at the Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 o'clock a. m., June 15, 1932, and then and there publicly opened for water lines including concrete manholes, piping, valves, and connections to existing mains at the Marine Barracks, Quantico, Va. Specification No. 6875 and accompanying drawings may be obtained on application to the Bureau or to the Commanding General, Marine Barracks, Quantico, Va. Deposit of a check or postal money order for \$10, payable to the Chief of the Bureau of Yards and Docks, is required as security for the safe return of the drawings and specification. The Government reserves the right to require, prior to the award of the contract, a statement of facts in detail of the business and technical organization and plant of the bidder available for the contemplated work, including financial resources for such part of the work as is not provided for by the stipulation in article 16 of the Standard Government Form of Contract (Construction) to be used, and experience of organization in construction of comparable work. The Government reserves the right to reject any bid respecting which the facts as to business and technical organization, financial resources, plant, or experience, compared with the project bid upon, justify such rejection. A. L. Parsons, Chief of Bureau, May 21, 1932.

Bids close June 28, 1932.

U. S. Engineer Office, Montgomery, Ala., Sealed bids, in quadruplicate, will be received until 2:00 P. M., June 28, 1932, and then publicly opened, for furnishing all labor and materials and performing all work, for dredging Pensacola-Mobile Intra-coastal Waterway from the mouth of Portage Creek, Ala., to the 11-foot hydrographic contour in Bon Secours Bay, Ala.; and the shoal area at the Pensacola Bay entrance to Big Lagoon, Fla., comprising 5,336,000 cubic yards, place measurement.

Bids close June 14, 1932.

Street Paving

Richmond, Va. SEALED PROPOSALS will be received at the office of the Director of Public Works, Richmond, Va., until 3 o'clock P. M., June 14th, 1932, for the Paving with Vitrified Brick on 6-inch concrete base, Clay Street, 2nd to 7th Street. Approximately 1,030 cubic yards excavation. Approximately 4,200 square yards vitrified brick pavement on 6-inch concrete base.

Form of Proposal, Plans and Specifications can be obtained on application.

A charge of \$2.50 will be made for these plans, etc., which sum will not be refunded. A CERTIFIED CHECK for the amount stated (\$600.00) on proposals must accompany each bid as a guaranty of execution of contract. The Director of Public Works reserves the right to reject any or all bids.

R. KEITH COMPTON,
Director Public Works,
City Hall.

Bids close June 14, 1932.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md. SEALED PROPOSALS for the construction of three sections of State Highway as follows:

Carroll County, Contract CI-107-511—Federal Aid Project No. 256—One section of State Highway along the Taneytown Pike from a point approximately 1.8 miles northwest of Tyrone via Taneytown to the Frederick County line for a distance of 7.13 miles. (Concrete Shoulders and Concrete Roadway.)

Worcester County, Contract Wo-112-14—Federal Aid Project No. 250—One section of State Highway along the Snow Hill-Whitton Road from end of contract Wo-103 toward Whitton for a distance of 1.89 miles. (Concrete.)

Worcester County, Contract Wo-122-111—Federal Aid Project No. 254—One section of State Highway along the Snow Hill-Pocomoke Road in Snow Hill, for a distance of 0.19 miles and from a point approximately 3 miles southwest of Snow Hill toward Pocomoke for a distance of 3.0 miles. Total 3.19 miles. (Concrete Shoulders.)

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 14th day of June, 1932, at which time and place they will be publicly opened and read. PREQUALIFICATION OF BIDDERS REQUIRED.

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 31st day of May, 1932.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close June 30, 1932.

OFFICE OF THE CONSTRUCTING QUARTERMASTER, Fort Benning, Georgia. Sealed bids in triplicate, for the construction of Seven (7) Non-commissioned Officers' Quarters and Eighty-eight (88) Garages at this station, will be received at this office until 10 A. M., June 30, 1932, and then publicly opened. The Government reserves the right to accept or reject any or all bids.

Bids close July 1, 1932.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., June 4, 1932.—**SEALED BIDS**, in duplicate subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 1, 1932, for furnishing all labor and materials and performing all work for the construction of the U. S. post office at Grove City, Pa. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not to exceed 3 sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any subcontractor or material firm interested, and to quantity surveyors, provided a deposit of \$15.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 17, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., June 2, 1932.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 17, 1932, for furnishing all labor and materials and performing all work for the remodeling and enlarging of the U. S. post office at Kingston, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding one set, may be obtained by any satisfactory general contractor at this office in the discretion of the supervising architect. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close July 8, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 3, 1932.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., July 8, 1932, for furnishing all labor and materials and performing all work for the construction (except elevators and dumb-waiters) of the U. S. post office at Rochester, N. Y. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50.00 is made for each set to assure its prompt return. One set will be furnished builders' exchanges, chambers of commerce or other organizations who will guarantee to make them available for any subcontractor or material firm interested, and to quantity surveyors, provided a deposit of \$50.00 is made to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 14, 1932.

Bulkhead Construction

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.
SEALED PROPOSALS for bulkhead construction as follows:
Calvert County, Contract No. C-55-811—Steel sheet piling bulkhead, approximately 470' in length, along Patuxent River at Solomons Island
will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Sts., Baltimore, Maryland, until 12 M. on the 14th day of June, 1932, at which time and place they will be publicly opened and read. **PREQUALIFICATION OF BIDDERS REQUIRED.**

Bids must be made upon the blank proposal form which, with specifications and plans will be furnished by the Commission upon application and cash payment of \$1.00, for each separate project, as hereafter no charges will be permitted.

No bids will be received unless accom-

panied by a certified check, payable to the State Roads Commission of Maryland, as required by Sec. 6, Chapter 539, Acts of 1931, of the amount as set forth in the proposal form.

The successful bidder will be required to give bond, and comply with the Acts of the General Assembly of Maryland, respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 31st day of May, 1932.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close June 21, 1932.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 3, 1932.—**SEALED BIDS**, in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 3 p. m., June 21, 1932, for furnishing all labor and materials and performing all work for the construction of condensing water supply and discharge systems for air conditioning buildings in triangle group, at Washington, D. C. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931, (Public No. 798). Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect by any satisfactory general contractor, and provided a deposit of \$50.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. Cash deposits will not be accepted. **JAS. A. WETMORE**, Acting Supervising Architect.

Bids close June 23, 1932.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., May 26, 1932.—**SEALED BIDS** in duplicate, subject to the conditions contained herein, will be publicly opened in this office at 2 p. m., June 23, 1932, for furnishing all labor and materials and performing all work for new toilet room, etc., at the U. S. post office and court house, Oxford, Miss. The prevailing rate of wage shall be paid all laborers and mechanics employed on the project as provided in the Act of March 3, 1931 (Public No. 798). Drawings and specifications may be obtained from the custodian at the building or at this office, in the discretion of the supervising architect. **JAS. A. WETMORE**, Acting Supervising Architect.

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—(Chilled Iron.)

Fuller Lehigh Co., Fullerton, Penna.

—(Gray Iron.)

Fuller Lehigh Co., Fullerton, Penna.

Giamorgan Pipe & Fdy. Co., Lynchburg, Va.

Jefferson Foundry Co., Birmingham, Ala.

Richmond Foundry & Mfg. Co., Richmond, Va.

Salem Fdry. & Mch. Wks., Salem, Va.

Schofield's Sons Co., J. S., Macon, Ga.

—(Semi-Steel.)

Jefferson Foundry Co., Birmingham, Ala.

Salem Fdry. & Mch. Wks., Salem, Va.

—(Steel.)

Cincinnati Steel Castings Co., Cincinnati, Ohio.

Crucible Steel Casting Co., Landsdowne, Delaware Co., Pa.

Lunkenheimer Co., Cincinnati, Ohio.

CEMENT (Portland.)

Alpha Portland Cement Corp., Birmingham, Ala.

CHAIRS (Opera and Theatre.)

Andrews Co., A. H., Chicago, Ill.

CHEMICALS.

Grasselli Chemical Co., Inc., Birmingham.

CHEMISTS, CHEMICAL ENGINEERS (Analytical.)

Froehling & Robertson, Inc., Richmond, Va.

Hunt Co., Robert W., Chicago, Ill.

Pittsburgh Testing Laboratories, Pittsburgh, Pa.

CHIMNEYS (Concrete.)

Rust Engineering Co., Birmingham, Ala.

—(Radial Brick.)

Rust Engineering Co., Birmingham, Ala.

CHUTES (Mail.)

Cutler Mail Chute Co., Rochester, N. Y.

CIRCUIT BREAKERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

CLUTCHES (Friction.)

Caldwell Co., Inc., W. E., Louisville, Ky.

COAL (Bituminous.)

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COAL and Ash-Handling Mch.

Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.

—Tipples.

American Bridge Co., Pittsburgh, Pa.

Virginia Bridge & Iron Co., Roanoke, Va.

COKE.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

CONCRETE Construction (Reinforced.)

Rust Engineering Co., Birmingham, Ala.

CONCRETE MIXERS.

Dunlap & Roebert Press Co., Inc., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

CONDENSERS.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

CONDUITS (Electric, Interior, Steel.)

Western Electric Co., New York, N. Y.

CONTRACTORS (Bridge.)

Hardaway Contracting Co., Columbus, Ga.

Snare Corp., Frederick, New York, N. Y.

—(Drainage and Dredging.)

Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

—Drilling.

Kennedy-Riegger Drilling Co., New York City.

Mott Core Drilling Co., Huntington, W. Va.

Pennsylvania Drilling Co., Pittsburgh, Pa.

Sprague & Henwood, Inc., Scranton, Pa.

—(Electrical.)

Walker Electrical Co., Atlanta, Ga.

Warner Service Co., Knoxville, Tenn.

Webb Electric Co., Anderson, S. C.

—(Foundations and Dams.)

Snare Corp., Frederick, New York, N. Y.

CONTRACTORS (General.)

Blair, Algernon, Montgomery, Ala.

Burkes, Inc., J. V. & R. T., New Orleans.

Cornell Young Co., Inc., Macon, Ga.
Flake-Carter Constr. Co., Greenville, S. C.
White Engineering Corp., J. G., New York.

—(Industrial Buildings.)
Blair, Algernon, Montgomery, Ala.
Flake-Carter Constr. Co., Greenville, S. C.
Lockwood Greene Engrs., Inc., Boston.

—(Marble.)

Thrower Marble & Tile Co., Charlotte, N. C.

—(Power Piping.)

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Poe Piping & Heating Co., Greenville, S. C.

—(Railroad.)

Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)

Blair, Algernon, Montgomery, Ala.

—(Road and Street Paving.)

Flake-Carter Constr. Co., Greenville, S. C.

McCrory Co., J. B., Atlanta, Ga.

—Rubble Stone

Brown, Jas. W., Greensboro, N. C.

—(Sewerage and Waterworks.)

Hardaway Contracting Co., Columbus, Ga.

Layne & Bowler, Inc., Memphis, Tenn.

McCrory Co., J. B., Atlanta, Ga.

Snare Corp., Frederick, New York, N. Y.

—(Sprinkler System.)

Poe Piping & Heating Co., Greenville, S. C.

—Stone, Cut

Brown, Jas. W., Greensboro, N. C.

—Structural Steel.

Stewart, Harvey H., Charlotte, N.

CREOSOTE OIL.

American Creosote Wks., New Orleans, La.
Ayer & Lord Tie Co., Chicago, Ill.

CREOSOTED WOOD MATERIALS.

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.
Gulf States Creos. Co., Hattiesburg, Miss.
National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

CROSS ARMS, TIES (Creosoted.)

American Creosote Wks., New Orleans, La.
Atlantic Creosoting Co., Norfolk, Va.
Ayer & Lord Tie Co., Chicago, Ill.
Century Wood Preserving Co., Balto., Md.
Eppinger & Russell Co., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)

American Limestone Co., Knoxville, Tenn.
Baxley & Co., W. W., Roanoke, Va.
Culbert & Sons, W. F., Marion, Va.

CRUSHERS (Coal and Coke.)

Fuller Lehigh Co., Fullerton, Pa.

(Rock.)

Grundler Crusher & Pulverizer Co., St. Louis, Mo.

CRUSHING and Pulverizing Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Austin-Western Road Machinery Co., Chicago, Ill.
Fuller Lehigh Co., Fullerton, Pa.
Grundler Crusher & Pulverizer Co., St. Louis, Mo.

CULVERT PIPE (Cast Iron.)

Cast Iron Pipe Research Assn., Chicago.

(Corrugated Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.

CYLINDERS (Compressed Air, Gas.)

National Tube Co., Pittsburgh, Pa.

DESKS (School.)

Andrews Co., A. H., Chicago, Ill.

DITCHING MACHINERY.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DOORS (Cabinet Woodwork.)

Mitchell Mfg. Co., Robert, Cincinnati, O.

(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

(Rolling, Steel and Wood.)

Wilson Corp., The J. G., New York.

(Vault.)

York Safe & Lock Co., York, Penna.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

DRILLS (Diamond and Shot Core.)

Sprague & Henwood, Inc., Scranton, Pa.

(Oil and Artesian Well.)

Virginia Machinery & Well Co., Inc., Richmond, Va.

DRINKING FOUNTAINS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

DYNAMITE (Industrial and Agricultural.)

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

ECONOMIZERS (Fuel.)

Babcock & Wilcox Co., New York, N. Y.

ELECTRICAL Instruments and Supplies.

General Electric Co., Schenectady, N. Y.
Western Electric Co., New York, N. Y.

ELECTRICAL MACHINERY

(Generators, Motors, etc., New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Partridge, Arthur S., St. Louis, Mo.
Rockford Power Machy. Co., Rockford, Ill.

(Generators, Motors, etc., Used.)

Delta Equipment Co., Philadelphia, Pa.
Electric Service Co., Cincinnati, Ohio.
General Electric Co., Schenectady, N. Y.
O'Brien Machinery Co., The, Phila., Pa.
Reading Engineering Wks., Reading, Pa.
Rockford Power Machy. Co., Rockford, Ill.

—Repairing (Motors, Generators, etc.)

Electric Service Co., Cincinnati, Ohio.

ELECTRIC LIGHTING.

General Electric Vapor Lamp Co., Hoboken, N. J.
Westinghouse Lamp Co., New York City.

ELECTRICAL MACHINERY

(Generators, Motors, etc., New.)

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

ELEVATORS (Electric.)

Miller Co., St. Louis, Mo.

(Hand and Belt Power.)

Miller Co., St. Louis, Mo.

ENGINEERS (Airports.)

Lockwood Greene Engrs., Inc., New York.

(Appraisal.)

Main, Inc., Chas. T., Boston, Mass.

Wiedeman and Singleton, Inc., Atlanta.

(Bridge.)

Gardner & Howe, Memphis, Tenn.

Hardway Contracting Co., Columbus, Ga.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Steel & Leiby, Knoxville, Tenn.

Virginia Bridge & Iron Co., Roanoke, Va.

Wiley & Wilson, Lynchburg, Va.

(Chemical.)

Dow, A. W., New York.

Picard Laboratories, Birmingham, Ala.

(Civil.)

Saxe, Van Rensselaer P., Baltimore, Md.

Spring, Chas. Herbert, Greensboro, N. C.

Steel & Leiby, Knoxville, Tenn.

Wiley & Wilson, Lynchburg, Va.

(Consulting.)

Converse & Co., J. B., Mobile, Ala.

Engineering Service Corp., Houston, Tex.

Goder, Joseph, Chicago, Ill.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Saxe, Van Rensselaer P., Baltimore, Md.

Wiedeman & Singleton, Inc., Atlanta, Ga.

Wiley & Wilson, Lynchburg, Va.

(Dams.)

Alpaugh & Sons, Chas. W., Manassas, Va.

Gardner & Howe, Memphis, Tenn.

Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

Lee Engineering Corp., William S., Charlotte, N. C.

Wiley & Wilson, Lynchburg, Va.

(Electrical.)

Engineering Service Corp., Houston, Tex.

Webb Electric Co., Anderson, S. C.

Wiley & Wilson, Lynchburg, Va.

(Electric Light and Power.)

Bylesby Engineering and Management Corp., Chicago, Ill.

Lee Engineering Corp., William S., Charlotte, N. C.

White Engineering Corp., J. G., New York, N. Y.

Wiley & Wilson, Lynchburg, Va.

(Gas.)

Bylesby Engineering and Management Corp., Chicago, Ill.

(Geological.)

Proehling & Robertson, Inc., Richmond, Va.

(Harbor Improvements.)

Engineering Service Corp., Houston, Tex.

(Heating.)

Wiley & Wilson, Lynchburg, Va.

(Hydraulic.)

Alpaugh & Sons, Chas. W., Manassas, Va.

Wiley & Wilson, Lynchburg, Va.

(Hydro-electric.)

Alpaugh & Sons, Chas. W., Manassas, Va.

Bylesby Engineering and Management Corp., Chicago, Ill.

Lee Engineering Corp., William S., Charlotte, N. C.

White Engineering Corp., J. G., New York, N. Y.

Wiley & Wilson, Lynchburg, Va.

(Ice and Refrigerating.)

Engineering Service Corp., Houston, Tex.

(Industrial Plants.)

Consoer, Older & Quinlan, Inc., Chicago.

Converse & Co., J. B., Mobile, Ala.

Gardner & Howe, Memphis, Tenn.

Lockwood Greene Engrs., Inc., New York.

Main, Inc., Chas. T., Boston, Mass.

Wiley & Wilson, Lynchburg, Va.

(Industrial Survey.)

Converse & Co., J. B., Mobile, Ala.

Lockwood Greene Engrs., Inc., New York.

(Inspection and Tests.)

Dow, A. W., New York.

Proehling & Robertson, Inc., Richmond, Va.

Hunt Co., Robert W., Chicago, Ill.

McCallum Inspection Co., Norfolk, Va.

Picard Laboratories, Birmingham, Ala.

(Lighting.)

General Electric Vapor Lamp Co., Hoboken, N. J.

Westinghouse Lamp Co., New York City.

(Mechanical.)

Wiley & Wilson, Lynchburg, Va.

(Mining. See Engineers, Geological.)**(Municipal.)**

Consoer, Older & Quinlan, Inc., Chicago.

Harrub Engr. Co., C. N., Nashville, Tenn.

McCrary Co., The J. B., Atlanta, Ga.

Wiley & Wilson, Lynchburg, Va.

(Paving and Roads.)

Dow, A. W., New York.

Harrub Engr. Co., C. N., Nashville, Tenn.

(Public Service Properties.)

Bylesby Engineering and Management Corp., Chicago, Ill.

Main, Inc., Chas. T., Boston, Mass.

White Engineering Corp., J. G., New York.

(Reinforced Concrete Bridges, Buildings, etc.)

Saxe, Van Rensselaer P., Baltimore, Md.

Steel & Leiby, Knoxville, Tenn.

(Sanitary.)

Wiley & Wilson, Lynchburg, Va.

(Sewage Disposal Plants.)

McCrary Co., The J. B., Atlanta, Ga.

Wiley & Wilson, Lynchburg, Va.

(Sewerage and Waterworks.)

Consoer, Older & Quinlan, Inc., Chicago.

Harrub Engr. Co., C. N., Nashville, Tenn.

Wiedeman & Singleton, Inc., Atlanta, Ga.

Wiley & Wilson, Lynchburg, Va.

(Structural.)

Saxe, Van Rensselaer P., Baltimore, Md.

Virginia Bridge & Iron Co., Roanoke, Va.

(Textile Mills.)

Lockwood Greene Engrs., Inc., New York.

Main, Inc., Chas. T., Boston, Mass.

(Ventilating and Heating.)

Wiley & Wilson, Lynchburg, Va.

(Water Supply.)

Wiley & Wilson, Lynchburg, Va.

ENGINES (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

(Diesel Type.)

Fairbanks, Morse & Co., Chicago, Ill.

Superior Engine Co., Springfield, O.

(Gas and Gasoline.)

Sterling Engine Co., Buffalo, N. Y.

(Marine.)

Fairbanks, Morse & Co., Chicago, Ill.

(Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Schofield's Sons Co., J. S., Macon, Ga.

ENVELOPES.

Young & Selden Co., Baltimore, Md.

ERECTOR (Structural Steel.)

Stewart, Harvey H., Charlotte, N. C.

ESTIMATORS (Building & Construction.)

Spring, Chas. Herbert, Greensboro, N. C.

EXCAVATING MACHINERY.

Austin-Western Road Machinery Co., Chicago, Ill.

Owen Bucket Co., The, Cleveland, Ohio.

EXCAVATORS (Clamshell and Orange Peel.)

Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.

(Dragline. See Dragline Excavators.)**(Trench.)**

Ohio Power Shovel Co., Lima, Ohio.

EXPANSION JOINTS (Road and Street.)

Carey Co., Philip, Lockland, Cincinnati, Ohio.

EXPLOSIVES.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

FEED-WATER HEATERS and Purifiers.

American Water Softener Co., Phila., Pa.

International Filter Co., Chicago, Ill.

FENCING, ENTRANCE GATES (Iron, Steel and Wire.)

American Steel and Wire Co., Balto., Md.

Cyclone Fence Co., Waukegan, Ill.

FENCING (Field and Industrial, Wire Woven.)

American Steel and Wire Co., Balto., Md.

Cyclone Fence Co., Waukegan, Ill.

FERTILIZER Mixing Plants.

Grundler Crusher & Pulverizer Co., St. Louis, Mo.

FILTERS (For Domestic and Industrial Purposes.)

American Water Softener Co., Phila., Pa.

Bacharach & Co., E. W., Kansas City, Mo.

International Filter Co., Chicago, Ill.

Roberts Filter Mfg. Co., Darby (Phila.), Mo.

FINANCING.

Electric Bond & Share Co., New York.

FIREPROOF Doors and Shutters

Wilson Corp., The J. G., New York City.

FITTINGS (Wire Rope.)

American Steel and Wire Co., Chicago, Ill.

Roebbing's Sons Co., John A., Trenton, N. J.

FLANGES (Iron and Steel.)

Dart Mfg. Co., E. M., Providence, R. I.

FLOOR (Asphalt Mastic.)

Barber Asphalt Co., Philadelphia, Pa.

—(Northern Hard Maple.)

Holt Hardwood Co., Oconto, Wis.

—(Open Steel.)

Kerlow Steel Flooring Co., Jersey City, N. J.

FLOOR Plates and Stair Treads.

Central Iron & Steel Co., Harrisburg, Pa.

FLOOR SURFACING (Concrete, Wood, etc.)

Union Products Co., Cleveland, Ohio.

FLOORING (Laid and Finished.)

Osborne, Earl N., Roanoke, Va.

FORMED PRODUCTS (Roofing.)

American Rolling Mill Co., Middletown, O.

FOUNDRIES and Machine Shops.

General Machine Works, York, Pa.

Glamorgan Pipe & Fdy. Co., Lynchburg, Va.

Richmond Foundry & Mfg. Co., Richmond, Va.

FOUNDRY Equipment and Supplies.

Hill & Griffith Co., Cincinnati, O.

FOUNDRY FACINGS (Tale and Soapstone.)

Hill & Griffith Co., Cincinnati, O.

FURNACES (Water-Cooled.)

Fuller Lehigh Co., Fullerton, Pa.

GALVANIZED Products.

Cattle & Bros., Jos. P., Philadelphia, Pa.

—Steel and Iron.

American Rolling Mill Co., Middletown, O.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

GAS (Domestic, Industrial Use.)

American Gas Assn., New York, N. Y.

Associated Gas & Elec. System, New York, N. Y.

GAS HOLDERS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks.,

—(Steam.)
Dake Engine Co., Grand Haven, Mich.

HOTELS.

Southern Hotel, The, Baltimore, Md.

HYDRANTS (Fire.)

Myers & Bros. Co., The, F. E. Ashland, Ohio

HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)

Crisp County Power Commission, Cordele, Ga.
Seaboard Public Service Co., Alexandria, Va.

INCINERATORS.

Brooks-Fisher Co., Atlanta, Ga.
D-N Corporation, New York, N. Y.
Goder, Joseph, Chicago, Ill.

INCORPORATORS.

Delaware Registration Trust Co., Wilmington, Del.

INSULATING MATERIALS

General Electric Co., Schenectady, N. Y.

—Quilt.

Cabot, Inc., Samuel, Boston, Mass.

INSURANCE (Group Pension).

Prudential Insurance Co., Newark, N. J.

INVESTMENT SECURITIES.

Electric Bond & Share Co., New York.

IRON.

—(Ingot, for Culverts, etc.)
American Rolling Mill Co., Middletown, O.

JAIL CELLS.

Roanoke Iron & Bridge Wks., Roanoke, Va.

JOINTS (Pipe.)

Leadite Co., Philadelphia, Pa.

KETTLES (Pavers and Roofers.)

Honhorst Co., Jos., Cincinnati, O.

LADDERS (Rolling.)

Myers & Bros. Co., The, F. E. Ashland, O.

LAMPS (Incandescent.)

General Electric Vapor Lamp Co., Hoboken, N. J.

Western Electric Co., New York, N. Y.

Westinghouse Lamp Co., New York City.

LIGHTING (Factory and Mill.)

General Electric Vapor Lamp Co., Hoboken, N. J.

Westinghouse Lamp Co., New York City.

—Fixtures (Electric.)

Western Electric Co., New York City.

Westinghouse Lamp Co., New York City.

LININGS (Flue, Fire Clay.)

Lee Clay Products Co., Clearfield, Ky.

Owensboro Sewer Pipe Co., Owensboro, Ky.

—(Tube Mill.)

Fuller Lehigh Co., Fullerton, Pa.

LITHOGRAPHERS and ENGRAVERS.

Smith & Son Co., Oscar T., Balto., Md.

Young & Selden Co., Baltimore, Md.

LOADING and UNLOADING MACHINERY (Portable.)

Northwest Engineering Co., Chicago, Ill.

Locomotives. (Gasoline.)

Whitcomb Locomotive Co., Rochelle, Ill.

—(Industrial.)

Southern Iron & Equipment Co., Atlanta.

Whitcomb Locomotive Co., Rochelle, Ill.

—(Mining.)

Whitcomb Locomotive Co., Rochelle, Ill.

—(Railway.)

Southern Iron & Equipment Co., Atlanta.

Whitcomb Locomotive Co., Rochelle, Ill.

LUBRICANTS.

Gulf Refining Co., Pittsburgh, Pa.

LUBRICATORS (Force Feed.)

Lunkenshelmer Co., The, Cincinnati, O.

LUMBER (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.

Atlantic Creosoting Co., Norfolk, Va.

Ayer & Lord Tie Co., Inc., Chicago.

Century Wood Preserving Co., Balto., Md.

Eppinger & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

MACHINERY (Special.)

Bertsch & Co., Cambridge City, Ind.

Earle Gear & Machine Co., Phila., Pa.

General Machine Works, York, Pa.

Gerding Bros., Cincinnati, O.

MACHINERY and Supplies (New and Used.)

Electric Service Co., Cincinnati, Ohio.

Marine Metal & Supply Co., New York.

O'Brien Machinery Co., The, Phila., Pa.

Partridge, Arthur S., St. Louis, Mo.

Reading Engineering Wks., Reading, Pa.

MACHINE TOOLS. (Used.)

Delta Equipment Co., Philadelphia, Pa.

O'Brien Machinery Co., Philadelphia, Pa.

MAIL CHUTES.

Cutler Mail Chute Co., Rochester, N. Y.

MARBLE (Producers and Manufacturers.)

Georgia Marble Co., The, Tate, Ga.

METAL Cutting Machinery.

Earle Gear & Machine Co., Phila., Pa.

METAL STAMPING.

Gerding Bros., Cincinnati, O.

MIXERS (Plaster and Mortar.)

Dunning & Boschert Press Co., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

MOTORS (Electric.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Armstrong & Bro. Co., R. S., Atlanta, Ga.

Fairbanks, Morse & Co., Chicago, Ill.

General Electric Co., Schenectady, N. Y.

Western Electric Co., New York City.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

MOTOR TRUCKS.

International Harvester Co. of America, Inc., Chicago, Ill.

NAILS and Spikes.

American Steel & Wire Co., Balto., Md.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

OIL (Fuel and Gas.)

Gulf Refining Co., Pittsburgh, Pa.

—Cups.

Lunkenshelmer Co., The, Cincinnati, O.

ORE-WASHING MACHINERY.

Georgia Iron Works, Augusta, Ga.

ORNAMENTAL Bronze Work.

Heath Co., J. S., Waukegan, Ill.

ORNAMENTAL Iron Work.

Austin Bros. Bridge Co., Atlanta, Ga.

Dietrich Bros., Baltimore, Md.

Roanoke Iron & Bridge Wks., Roanoke, Va.

Sneed Architectural Iron Works, Louisville, Ky.

Virginia Bridge & Iron Co., Roanoke, Va.

PAINT (Preservative.)

Cabot, Inc., Samuel, Boston, Mass.

PANELBOARDS.

Adam Electric Co., Frank, St. Louis.

PARTITIONS (Sectionfold, Rolling, Wood.)

Wilson Corp., The, J. G., New York.

PATENT ATTORNEYS.

Buck, Sterling P., Washington, D. C.

Coleman, Watson E., Washington, D. C.

Edson, Paul B., Charlotte, N. C.

Sannett, Edward C., Washington, D. C.

Seymour & Bright, Washington, D. C.

PAVING (Asphaltic Concrete.)

Culbert & Sons, W. F., Marion, Va.

PAVING Blocks (Creosoted Wood.)

American Creosote Works, New Orleans.

Ayer & Lord Tie Co., Chicago, Ill.

Century Wood Preserving Co., Balto., Md.

PENSIONS (Insurance.)

Prudential Insurance Co., Newark, N. J.

PENSTOCKS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks., Birmingham.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Smith Co., S. Morgan, York, Pa.

PERFORATED METAL.

Erdie Perforating Co., Rochester, N. Y.

Harrington & King Perf. Co., Chicago.

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

Mundt & Sons, Charles, Jersey City, N. J.

PETROLEUM REFINERS.

Gulf Refining Co., Pittsburgh, Pa.

PIG-IRON.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

PILES, POSTS, Poles (Creosoted.)

American Creosote Wks., New Orleans, La.

Atlantic Creosoting Co., Norfolk, Va.

Ayer & Lord Tie Co., Chicago, Ill.

Century Wood Preserving Co., Balto., Md.

National Lumber & Creosoting Co., Texarkana, Ark.-Tex.

PILING—(Steel Sheet.)

Carnegie Steel Co., Pittsburgh, Pa.

—(Yellow Pine.)

Century Wood Preserving Co., Balto., Md.

PIPE.

Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Birmingham Boiler & Engr. Co., Birmingham, Ala.

Central Pipe & Supply Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Brooklyn, N. Y.

Maryland Pipe & Steel Corp., Baltimore, Md.

McDowell Pipe Corp., Brooklyn, N. Y.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Standard Piping & Fitting Co., Phila.

Tri State Pipe Co., Bellaire, Ohio.

Wides Pipe & Supply Co., Cincinnati, O.

—(Cast Iron.)

Cast Iron Pipe Research Asso., Chicago.

Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

—(Hammer-Welded.)

National Tube Co., Pittsburgh, Pa.

—(Iron and Steel, Spiral.

Welded.)

American Rolling Mill Co., Middletown, O.

—(Second-Hand.)

Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Brooklyn, N. Y.

Marine Metal & Supply Co., New York.

Maryland Pipe & Steel Corp., Baltimore, Md.

McDowell Pipe Corp., Brooklyn, N. Y.

Tri State Pipe Co., Bellaire, Ohio.

Wides Pipe & Supply Co., Cincinnati, O.

—(Steel.)

Bethlehem Steel Co., Bethlehem, Pa.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Standard Piping & Fitting Co., Phila.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

PIPE (Fittings.)

Georgia Iron Works, Augusta, Ga.

Standard Piping & Fitting Co., Phila.

PIPE Machinery (Concrete.)

Quinn Wire & Iron Works, Boone, Iowa.

—Unions and Joints.

Dart Mfg. Co., E. M., Providence, R. I.

—Systems (Industrial.)

Moore Pipe & Sprinkler Co., Jacksonville, Fla.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Standard Piping & Fitting Co., Phila.

PLATES (Steel and Iron.)

American Rolling Mill Co., Middletown, O.

Bethlehem Steel Co., Bethlehem, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Central Iron & Steel Co., Harrisburg, Pa.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

POLES—(Tubular, Steel.)

National Tube Co., Pittsburgh, Pa.

—(Yellow Pine.)

Century Wood Preserving Co., Balto., Md.

POLISHING MACHINERY.

(Wheels, Blocks.)

Carborundum Co., Niagara Falls, N. Y.

PORCH COLUMNS (Wood.)

Schwerdt Mfg. Co., A. F., Pittsburgh.

PORTLAND CEMENT.

Alpha Portland Cement Co., Birmingham, Ala.

POWER TRANSMISSION MACHINERY.

Schofield's Sons Co., J. S., Macon, Ga.

PRESSES. (Baling, Cottonseed Oil, Hydraulic and Power.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

PRINTERS (Book, Catalog, Job.)

Smith & Son Co., Oscar T., Baltimore, Md.

Young & Selden Co., Baltimore, Md.

PULLEYS (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.

PULVERIZED COAL EQUIPMENT.

Fuller Lehigh Co., Fullerton, Pa.

PULVERIZERS. (See Crushing and Pulverizing Machinery.)**PUMPING MACHINERY.**

Fairbanks, Morse & Co., Chicago, Ill.

La Bour Co., Elkhart, Ind.

Layne & Bowler, Inc., Memphis, Tenn.

Layne & Bowler, Inc., Memphis, Tenn.

—(Deep Well.)

Layne & Bowler, Inc., Memphis, Tenn.

—(Hydraulic.)

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

—(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.

—(Sand and Dredging.)

Georgia Iron Works, Augusta, Ga.

—(Steam.)

Fairbanks, Morse & Co., Chicago, Ill.

—(Water Works.)

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PUNCHING and SHEARING MACHINERY.

Bertsch & Co., Cambridge City, Ind.

RADIATOR ENCLOSURES.

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SEAWALLS.
Shore-Line Builders, Inc., Jacksonville, Fla.
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D-N Corporation, New York, N. Y.

SEWER Joint Compounds.
Leadite Co., Philadelphia, Pa.
—Pipe (Vitrified.)
Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.

SEWER Pipe Machinery.
Quinn Wire & Iron Works, Boone, Iowa.

SHAFTING Material (Tubular.)
National Tube Co., Pittsburgh, Pa.

SHARPENING Stones.
Carborundum Co., Niagara Falls, N. Y.

SHEET Steel and Iron.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, O.

—Metal Working Machinery.
Bertuch & Co., Cambridge City, Ind.

SHEETS (Asbestos.)
Ruberoid Co., New York City.

—(Galvanized and Black.)
American Rolling Mill Co., Middletown, Pa.
American Sheet & Tin Plate Co., Pittsburgh, Pa.

SHINGLES (Asbestos.)
Ruberoid Co., New York City.

SHIPBUILDING.
Charleston Dry Dock & Machine Co., Charleston, S. C.

SHOVELS (Steam, Gas and Electric Power.)
Austin-Western Road Machinery Co., Chicago, Ill.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.

SILICATE OF SODA.
Grasselli Chemical Co., Inc., Birmingham.

SITES (Manufacturing.)
Associated Gas & Elec. System, New York, N. Y.
Crisp County Power Co., Cordelle, Ga.
Galveston, Texas, City of.
Industrial Commission, Winston-Salem, N. C.
Missouri Pacific R. R., St. Louis, Mo.
Model Land Company (Flagler System), St. Augustine, Fla.
Seaboard Public Service Co., Alexandria, Va.

SLINGS (Wire Rope.)
American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.

SLUICE GATES AND APPLIANCES.
Smith Co., S. Morgan, York, Pa.

SPEED REDUCERS.
Barto Gear & Mach. Co., Phila., Pa.

SPIKES (Railroad, Ship.)
Bethlehem Steel Co., Bethlehem, Pa.
Sweet's Steel Co., Williamsport, Pa.

SPIRALS (Machinery, Railway, Spiral Steel.)
American Steel & Wire Co., Balto., Md.

—(Wire—All Kinds.)
American Steel & Wire Co., Balto., Md.

SPRINKLERS (Automatic Fire.)
Moore Pipe & Sprinkler Co., Jacksonville, Fla.

STACKS (Iron and Steel.)
Birmingham Boiler and Engineering Co., Birmingham, Ala.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Hedges Walsh Weldner Co., Chattanooga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.

STAINS (Shingle, Woodwork.)
Cabot, Inc., Samuel, Boston, Mass.

STAIR TREADS.
Central Iron & Steel Co., Harrisburg, Pa.

STANDPIPES.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

STATIONERS (Envelopes, Letter and Billheads, etc.)
Smith & Son Co., Oscar T., Balto., Md.
Young & Selden Co., Baltimore, Md.

STEAM (Specialties.)
Lunkenheimer Co., The, Cincinnati, O.

STEEL.
American Rolling Mill Co., Middletown, O.
Bethlehem Steel Co., Bethlehem, Pa.
Central Iron & Steel Co., Harrisburg, Pa.

Dietrich Brothers, Baltimore, Md.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Cold Rolled.)
American Steel & Wire Co., Balto., Md.

—(Fabricators.)
United Welding Co., Middletown, O.

—(Tool, High Speed.)
Bethlehem Steel Co., Bethlehem, Pa.

STEEL Buildings (Designers and Builders.)
American Bridge Co., Pittsburgh, Pa.
Belmont Iron Works, Philadelphia, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.
McClintic-Marshall Corp., Bethlehem, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

—Plate Construction (Riveted or Welded.)
Birmingham Boiler & Engr. Co., Birmingham, Ala.
Bristol Steel & Iron Works, Inc., Bristol, Va.
Carolina Steel & Iron Co., Greensboro, N. C.

Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Hedges Walsh Weldner Co., Chattanooga.
McClintic-Marshall Corp., Bethlehem, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
United Welding Co., Middletown, O.

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Babcock & Wilcox Co., The, New York.
Detroit Stoker Company, Detroit, Mich.

STRUCTURAL STEEL AND IRON.
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Austin Bros. Bridge Co., Atlanta, Ga.
Belmont Iron Works, Philadelphia, Pa.
Bristol Steel & Iron Works, Inc., Bristol, Va.

Carnegie Steel Co., Pittsburgh, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Dietrich Brothers, Baltimore, Md.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
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Snead Architectural Iron Works, Louisville, Ky.
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Virginia Bridge & Iron Co., Roanoke, Va.

SULPHATE OF ALUMINA.
Grasselli Chemical Co., Inc., Birmingham.

SULPHIDE OF SODA.
Grasselli Chemical Co., Inc., Birmingham.

SULPHURIC ACID.
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

SUPER-HEATERS (Steam.)
Babcock & Wilcox Co., The, New York.

SURFACING (Roads and Streets)
Culbert & Sons, W. F., Marion, Va.

SURVEYS (Quantity.)
Spring, Charles Herbert, Greensboro, N. C.

SURVEYING INSTRUMENTS.
Weber Co., Inc., F., Philadelphia, Pa.

SWINGING ENGINES.
Dake Engine Co., Grand Haven, Mich.

SWITCHBOARDS, SWITCHES, ETC.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

TANKS (Air Compressor.)
Titusville Iron Works Co., Titusville, Pa.

—(Elevated Steel.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., R. D., Newnan, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Smith Co., S. Morgan, York, Pa.

—(Elevated Wood.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.

—(Iron and Steel.)
American Bridge Co., Pittsburgh, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Cole Mfg. Co., R. D., Newnan, Ga.
Finnigan Co., Inc., J. J., Atlanta, Ga.
McClintic-Marshall Corp., Bethlehem, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Titusville Iron Works Co., Titusville, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Seamless Steel.)
National Tube Co., Pittsburgh, Pa.

—(Storage, Oil, etc.)
Birmingham Boiler & Engr. Co., Birmingham, Ala.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Birmingham.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Titusville Iron Works Co., Titusville, Pa.
United Welding Co., Middletown, O.

—(Wood.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Virginia Mch. & Well Co., Richmond, Va.

TARPAULINS.
Atlanta Tent & Awning Co., East Point, Ga.
Fulton Bag & Cotton Mills, Atlanta, Ga.

TELEPHONE SERVICE.
American Telephone & Telegraph Co.

TENTS.
Fulton Bag & Cotton Mills, Atlanta, Ga.

TEXTILE CHEMICALS.
Grasselli Chemical Co., Inc., Birmingham.

TILE (Floor.)
Hood Co., B. Mifflin, Daisy, Tenn.

—(Roof.)
Hood Co., B. Mifflin, Daisy, Tenn.

—(Sewer.)
Lee Clay Products Co., Clearfield, Ky.

TIN AND TERNE PLATES.
American Sheet & Tin Plate Co., Pittsburgh, Pa.

TOOLS AND DIES.
Gerding Bros., Cincinnati, O.

TOWERS (Electric Transmission.)
American Bridge Co., Pittsburgh, Pa.

—(Steel and Wood.)
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newnan, Ga.

TRACK (Portable or Permanent.)
Equipment Corp. of America, Chicago, Ill.
Sweet's Steel Co., Williamsport, Pa.

TRACTORS (Industrial.)
Caterpillar Tractor Co., Peoria, Ill.
International Harvester Co. of America, Inc., Chicago, Ill.

—(Road.)
Caterpillar Tractor Co., Peoria, Ill.

TRAILERS (Arch-Girder, Heavy Duty.)
Wellman Engr. Co., Cleveland, O.

TRAMRAIL SYSTEMS (Hand or Electric.)
Cleveland Crane & Engr. Co., Wickliffe, O.

TRAMWAYS (Aerial Wire Rope.)
American Steel & Wire Co., Balto., Md.

TRANSFORMERS.
General Electric Co., Schenectady, N. Y.

—(Used.)
Electric Service Co., Cincinnati, O.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

TRANSMISSION TOWERS
—(Galvanized.)
McClintic-Marshall Corp., Bethlehem, Pa.

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Grasselli Chemical Co., Inc., Birmingham.

TRUCKS (Motor.)
International Harvester Co. of America, Inc., Chicago, Ill.

TUBES (Boiler.) See
Boiler Tubes.

TUBING (Seamless Steel.)
National Tube Co., Pittsburgh, Pa.

TURBINES (Hydraulic.)
Smith Co., S. Morgan, York, Pa.

—(Steam.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

TURNABLES.
American Bridge Co., Pittsburgh, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.

UNIONS.
Dart Mfg. Co., E. M., Providence, R. I.

VALVES.
La Bour Co., Elkhart, Ind.
Lunkenheimer Co., The, Cincinnati, O.
Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Acid Proof.)
Lunkenheimer Co., The, Cincinnati, Ohio.

—(Corrosive Liquids.)
La Bour Co., Elkhart, Ind.

—(Gate.)
Lunkenheimer Co., The, Cincinnati, Ohio.

—(Non-Corrosive Liquids.)
La Bour Co., Elkhart, Ind.

VAULTS (Bank and Safe Deposit.)
York Safe & Lock Co., York, Penna.

WAGONS (Crawlers.)
Austin-Western Road Mchry. Co., Chicago, Ill.

WARDROBES (Hygienic, School.)
Wilson Corp., The J. G., New York.

WATER HEATERS.
Finnigan Co., Inc., J. J., Atlanta, Ga.

WATER Purification.
Barbarach & Co., E. W., Kansas City.
International Filter Co., Chicago, Ill.
Roberts Filter Mfg. Co., Darby (Phila.) Pa.

—Softening Apparatus (Purifying.)
American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.

—Works Supplies and Appliances.
Cast Iron Pipe Research Assn., Chicago.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

Layne & Bowler, Inc., Memphis, Tenn.
Leadite Co., Philadelphia, Pa.

WELDING.
Charleston Dry Dock & Machine Co., Charleston, S. C.
Hedges Walsh-Weldner Co., Chattanooga.
United Welding Co., Middletown, O.

WELDING APPARATUS (Electric Arc.)
General Electric Co., Schenectady, N. Y.
Layne & Bowler, Inc., Memphis, Tenn.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

WELL CONTRACTORS (Oil, Artesian, etc.)
Layne & Bowler, Inc., Memphis, Tenn.
Virginia Mch. & Well Co., Richmond, Va.

WHEELS AND AXLES.
Carnegie Steel Co., Pittsburgh, Pa.

WINDOW WASHING EQUIPMENT (Tramrail.)
Cleveland Crane & Engr. Co., Wickliffe, O.

WIRE (All Kinds.)
American Steel & Wire Co., Chicago.
Seneca Wire & Mfg. Co., Fostoria, O.

—(Barbed Wire, etc.)
American Steel & Wire Co., Balto., Md.

—(Fence.)
Cyclone Fence Co., Waukegan, Ill.
Stewart Iron Works Co., Cincinnati, O.

—(Flat and Round.)
American Steel & Wire Co., Balto., Md.
Roebbing's Sons Co., John A., Trenton, N. J.

Seneca Wire & Mfg. Co., Fostoria, O.

WIRE Cloth (Iron, Steel, Copper, Brass, etc.)
Harrington & King Perf. Co., Chicago.

Roebbing's Sons Co., John A., Trenton, N. J.
Seneca Wire & Mfg. Co., Fostoria, O.

—Goods.
Cyclone Fence Co., Waukegan, Ill.

—Rope (Transmission, Hoisting, Haulage.)
American Cable Co., New York City.
American Steel & Wire Co., Chicago, Ill.
Hazard Wire Rope Co., Wilkes-Barre, Pa.

Roebbing's Sons Co., John A., Trenton, N. J.

—Rope Clips.
American Steel & Wire Co., Balto., Md.

—Stapling.
Seneca Wire & Mfg. Co., Fostoria, O.

—(Telephone and Telegraph.)
American Steel & Wire Co., Balto., Md.

—(Welding.)
American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.

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WOOD PRESERVATIVES.
Century Wood Preserving Co., Boston.

WOOD TURNING (Columns, etc.)
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